PROGRAMME AND BOOK OF ABSTRACTS

OF THE 6TH CONFERENCE OF THE ASSOCIATION OF PHONETICIANS AND PHONOLOGISTS IN NIGERIA (APPN)

HOSTED IN COLLABORATION WITH

THE DEPARTMENT OF ENGLISH, UNIVERSITY OF UYO, UYO, AKWA IBOM STATE, NIGERIA

THEME

Artificial Intelligence and Spoken Language Communication: Intersections, Prospects and Problems

DATE: **Sunday, May 24 – Wednesday, May 27, 2026**
TIME: **10.00 am**

VENUE: 1000-Seater Capacity Auditorium, Main Campus, University of Uyo

Keynote Speaker
Professor Francis Egbokhare
Professor of Linguistics
University of Ibadan, Ibadan, Nigeria

Lead Paper Presenter
Professor Imelda I. Udoh
Department of Linguistics
University of Uyo, Uyo, Nigeria

Plenary Speaker
Professor Moses Ekpenyong
Department of Computer Science
University of Uyo, Uyo, Nigeria

THE NATIONAL ANTHEM

Nigeria we hail thee,
Our own dear native land,
Though tribe and tongue may differ,
In brotherhood, we stand,
Nigerians all, and proud to serve
Our sovereign Motherland.

Our flag shall be a symbol
That truth and justice reign,
In peace or battle honour'd,
And this we count as gain,
To hand on to our children
A banner without stain.

O God of all creation,
Grant this our one request,
Help us to build a nation
Where no man is oppressed,
And so with peace and plenty
Nigeria may be blessed.

University of Uyo Anthem: Arise and Shine

Let us all arise as one
And light up wisdom's path
The citadel our great forebears
Raised from nursery to its apogee
Now stand like a giant
In the African sun
Arise, arise, Great Uniuyo
We shall arise and shine
And take our place in the firmament
Of cultured men and women
Blest with wisdom, depth and vision
And leave behind traditions
For generations to come
Arise, Arise
Arise and shine forth, Great Uniuyo

PROGRAMME

Day One: Sunday, 24th May, 2026 Arrival / Registration

Day Two: Monday, 25th May, 2026 Morning Session – The Opening Ceremony 9.30am - 2.00p.m.

1.	Registration:	9.30 am - 9.50
2.	Guests and participants to be seated:	9.50 - 10.00
3.	Opening Prayer:	10.00 - 10.05
4.	National Anthem & Univ. Anthem:	10.05 - 10.10
5.	Introduction of Guests by the MC, Dr Imo Okon:	10.10 - 10.15
6.	Welcome Address: Prof. Taiwo Soneye, APPN Founding President:	10.15 - 10.20
7.	Remarks by the Chief Host: Prof. Samuel G. Odewumi, the Ag. Vice-Chancellor, University of Uyo, Uyo:	10.20 - 10.25
8.	Remarks by the Principal Host, Dean, Fac. of Arts, Prof. Stephen Inegbe:	10.25 - 10.30
9.	Speech by the Chairman, APPN Board of Trustees, Prof. Munzali Jibril:	10.30 - 10.35
10.	Remarks by the Host, Head of Dept., English, Prof. Nkereke Mfon Essien:	10.35 - 10.40
11.	Remarks by the Co-host, Chairman, Uyo L.G.A., Hon. Uwemedimo Udo:	10.40 - 10.45
12.	Citation of the Keynote Speaker: Prof. Francis Egbokhare, Department of Linguistics, University of Ibadan by Prof. Itoro Michael:	10.45 - 10.50

13. Keynote Address by Prof. Francis Egbokhare:

Artificial Intelligence and Spoken Language Communication: Intersections, Prospects and Problems - 10.50 - 11.40am

14.	Questions and Answers: (to be anchored by the Moderator):	11.40 - **12.00pm**
15.	**Presentation of Awards to Univ. of Uyo & Outgoing APPN Executives** By the Secretary to the Board of Trustees of APPN: Prof. Inyang Udofot:	12.00 - 12.10
16.	**Interlude**: Presentation of Hip-Hop Dance by University students:	12.10 - 12.20
17.	Citation of the Lead Paper Presenter by Professor Happiness Uduk:	12.20 - 12.25

18. Lead Paper: Prof. Imelda Udoh, Dept. of Linguistics and Nigerian Languages, University of Uyo:

A Pedagogy-Driven Chatbot Solution for Language Learning: Integrating AI-Driven Instruction within Mother Tongue-Based Education Frameworks 12.25 – 1.05pm

19.	Questions and answers (to be anchored by the moderator):	1.05 -1.20pm
20.	Interlude (TFA) and Poetry recitation	1.20 -1.35pm
21.	Vote of Thanks and Closing by the LOC Chair, Prof Josiah Ubong:	1.35 - 1.40pm
22.	**Lunch Break:**	1.40 - 2.00pm
23.	**PARALLEL SESSIONS: (Afternoon Session) onsite/online:**	**2.00 - 5.00pm**

Day Three: Tuesday, 26th May, 2026

1.	Arrival of Participants	9.00am - 9.10am
2.	Introduction of Participants by the MC, Dr Eno Inyangetuk:	9.10am - 9.15am
3.	Citation of the Plenary Speaker by Prof Charles Obot:	9.15am - 9.20am
4.	Plenary Session – Prof. Moses Ekpenyong **Theme: AI and Related Disciplines**	**9.20am - 10.00am**
5.	Contributions and Questions from participants:	10.00am - 10.20am
6.	Tea Break:	10.20am - 10.30am
7.	**PARALLEL SESSIONS: Online/Onsite:**	**10.30 - 2.00pm**
	Lunch Break:	2.00pm
8.	Vote of Thanks and Announcements by the MC	2.00pm
9.	**ANNUAL GENERAL MEETING OF APPN /ELECTION** (for only the Financial (2026) Members of the Association):	**2.30 - 4.00pm**

Day Four: Wednesday, 27th May, 2026: Departure - Safe Trip to all!!!

Parallel Sessions 1: Monday 25th May, 2026 – 2.30pm to 5.00pm (WAT)			
PARALLEL SESSION A	**PARALLEL SESSION B**	**PARALLEL SESSION C -ONLINE**	**PARALLEL SESSION D - ONLINE**
Venue: Front Row (Right) 1000-Seater Auditorium	Venue: Front Row (Left), 1000-Seater Auditorium	The Virtual Space -Zoom, Google meet/WhatsApp	The Virtual Space- Zoom, Google meet/WhatsApp
Prof. O. Melefa/Prof. Maria-Helen Ekah	Prof. Joseph Uhie /Dr Emem Udo	Prof A. Atolagbe/ Prof C.U.C. Ugorji	Dr Carol Anyagwa/ Dr James Faleye
1. James Ini Innocent **Title:** Phonology and Artificial Intelligence: The Effects of Pronunciation Errors on Speech Recognition and voice Typing Accuracy	**1. Precious N Stephen** **Title:** Artificial Intelligence in Coded Communication: Enhancing Security Protocols through Machine Learning Based Cryptographic Systems	**1.Oludayo Hezekiah Toki** **Title:** Artificial Intelligence versus Human Speech: A Comparative Study of Production and Representation	**1. Adegbite Halimah Oyinkansola** **Title:** AI Tools and Language Analytics Software in the Degemination Pattern of Students in Federal College of Education, Abeokuta
2. Nlem Alwell Okechukwu **Title:** Artificial Intelligence and the Human Speech Sound: A Phonetic and Computational Perspective	**2. Favour Samuel** **Title:** Artificial Intelligence and Phonological Explanation: Typologies from Nigerian English Data	**2. Malata A. Zakayo & S. Yohanna** **Title**: Phonological Error Patterns in Artificial Intelligence (AI) Transcriptions of TEDx Talks from Nigeria	**2. Salome Olajide-Buari** **Title:** A Phonetic Analysis of the Acoustic Threshold of AI Visual Prosody in Public Speakers' Rhetorical Emphasis
3. Evelyn Uko-Eninn **Title:** Modelling Suprasegmental Features in Second Language Acquisition using Artificial Intelligence	**3. Michael O. Gbadegesin** **Title:** Artificial Intelligence and the Analysis of Phonological Variations in Nigerian English	**3. JaneMaura O. Madu** **Title:** The Future of Spoken Language Pedagogy: Artificial Intelligence (AI), Automation and Human Agency	**3. Sunday Abraham** **Title:** Multimodal Strategies in AI-Generated Fake News in Digital Communication Ecology in Nigeria
4. Inyang Udofot **Title:** Bridging the Gap: Human Speech and Artificial Intelligence	4. **Kusua Senam** **Title:** Exploring the effectiveness of Artificial Intelligence in the Analysis of Segmental and Suprasegmental Features of Spoken English	**4. Aderonke Akinola & Rotimi Oladipupo** **Title**: An Acoustic Study of English Lateral Consonant /l/ in Educated Nigerian English	**4. Adeyinka Olubunmi Osibanjo** **Title**: Nigerian Pidgin Communication Encounters in Performance
5. Idongesit Imohowo Eyakndue **Title**: AI-mediated multimodal communication and its implications for language, identity, and culture	**5. Idara Effiong Moses** **Title**: Nigerian Languages Melodic Features of Ibibio Riddles	**5. Dr C. Anyagwa & O. Olaifa** **Title**: AI Read Aloud vs. the Human Reader in a Non-Native English Environment: The Intelligibility Question	**5.Titilope Omowumi Ogundele** **Title**: Intelligibility of Yoruba English to WhatsApp Transcriptor

6. Uduakabasi Francis Anthony **Title:** Impact of Artificial Intelligence on Educated Spoken Nigerian English: A Study of South-South Nigeria	**6. Enobong A. Daniel** **Title**: Artificial Intelligence and Dyslexia Management in Schools	**6. Mayowa Emmanuel Oyinloye** **Title**: Vowel Lengthening in Nigerian English	**6. Irene Harry** **Title:** Phonological bias in artificial intelligence: Nigerian English accent Variation
7. **Patricia Ogbuehi & Obiekea Stella** **Title:** Visual, Verbal, and Digital Semiotics: Exploring Multimodal Communication Practices among Social Media Users	**7. Abigail Nelson Anah** **Title:** Assimilation as computation: A rule-based phonological perspective on Artificial Intelligent	**7. Olayinka Adetayo Odubela** **Title:** A Different Approach to Discourse: Experimenting with Interactions of LLMs with Humans for Teaching English Phonology	7. **Abigail Okunola & Titilola Olayemi** **Title:** Segmental variations in Nigerian English sermons & its implications for AI-based Speech Recognition
Parallel Sessions: Tuesday, 26th May, 2026 – 10.30am to 2pm (WAT)			
Parallel Session A – ONSITE	**Parallel Session B - ONSITE**	**Parallel Session C - ONLINE**	**Parallel Session D - ONLINE**
Prof. Omotosho Melefa/ Dr Michael Gbadegesin	Prof. N. Essien/ Prof. Itoro Michael	Prof A. Atolagbe/Dr Carol Anyagwa	Prof Rotimi Oladipupo/Prof. M. Onwochei
1. Maureen Azuka Ezeani **Title:** Algorithmic Misrepresentation in Spoken Language Systems: Evidence from Igbo Tone Errors in AI Storytelling	**1. Ubokobong Ezekiel Umoh** **Title**: Artificial Intelligence as a tool for Mother Tongue Preservation	**1. Basheerat Damilola Jimoh** **Title:** English Consonant Modifications in Selected AI Generated Short Stories of Some Nigerian Content Creators	**1. Zainab Abdulkarim** **Title**: From Voice to Screen: The Digitisation of Oral Literature in Contemporary Nigeria
2. Emmanuel Ntun Eyam **Title**: Artificial Intelligence-Assisted Acoustic Analysis of Segmental and Suprasegmental Features in Educated Nigerian Spoken English	**2. Ndanti Ekuh** **Title:** Pron-Orthographic Conflict in English Language: AI to the Rescue	**2. Aleyo Ibrahim Mustapha** **Title:** Synthetic Analysis of acquisition of phonics skills towards sustainable letter sound development and pronunciation for child development in Adamawa State, Nigeria	**2. Oluwakemi Titilola Olayemi** **Title**: Phono-Critical Discourse Analysis of AI Pronunciation and the Revoicing of Yoruba and Igbo Indigenous Anthroponyms, Toponyms, and Cultural Expressions
3. Blessing Ogbokor **Title:** Vocabulary Acquisition and Artificial Intelligence (AI) Assisted Pronunciation Practice for Prolonged Memory Retention	**3.Obomunu W. Wilberforce** **Title**: L1 Transfer in L2 Phonology: The Influence of Ogbia language on English Pronunciation	**3. James O. Faleye & E. Osifeso** **Title:** Analysing Humour in Ai-Generated Dramatised-Children's Speech on Facebook	**3. Esther E. Abe & Treasure C. Okeke** **Title:** From L2 to L1: Phonological Transfer Effects of English on Nigerian Indigenous Languages

4. Mosunmola O.Adebayo **Title**: The Use of Phonoaesthetics and Cultural Symbolism in "Sorry": A Case Study of Mohbad's Song	**4. M. Lawson-Ikuru** **Title:** Substitution of /s/ with /ʃ/ in the Accent of Some Ogbia Speakers of English: A Sociophonetic Perspective	**4. S. Yohanna & Malata A. Zakayo** **Title:** Algorithmic Erosion: Generative AI as a Driver of Mother Tongue Attrition in Hausa	**4. Adenike Akinjobi** **Title:** Appropriateness of AI for Generating Notes on Phonology: Meta AI as a Case Study
5. Rosemary E. Benjamin **Title:** The Interface of the Ibibio Phonology and Syntax	**5. Stella Tọnyọ Akinola** **Title**: Phonetic Proximity versus Semantic Intent: The Cognitive Architecture of Malapropism	**5.Tosin Adeleke & Taiwo Soneye** **Title:** Speech-to-Text Analysis of Phonological Nuances in the International Corpus of English-Nigeria	**5. Ekaette Godwin Ekpodikpo** **Title**: Speech to text: The Phono-Semantic Implications of AI Interpretation of Ibibio English
6. Iniobong D. Utin **Title:** Artificial Intelligence Technology in Spoken Communication Pedagogy: An Evaluation	**6. Precious Sunday Augustus** **Title**: Oral Literature and Digital Literary Thoughts: Preserving Indigenous Narratives in the Digital Age	**6. JaneMaura Ogechukwu Madu** **Title**: Accent, Dialects and Google Speech Translation: Implication for Spoken Communication	**6. Carol Ngozi Anyagwa & Amara, Ezinwanne Favour** **Topic**: Artificial intelligence and mother tongue attrition: A case study of youths in secondary schools
7. Anasthasia Denis **Title:** AI-Driven Modeling of Speech Rhythm in Nigerian English: A Study of South-South Nigeria	**7. Mosunmola O. Adebayo** **Title**: Analysis of AI Mouth Diagrams in Vowel Pedagogy: A Study of Visual-Spatial Feedback in Undergraduate ESL Classrooms	**7. Morenike Adunni Adeniran & Bayo Oyedeji** **Title:** Oral Literature and Digitising Literary Thoughts	**7. Sadiya Abubakar Gwandu** **Title:** Correlates of Vowel Intrusion in the English of Educated Hausa Speakers: A Sociophonetic Study
8. Uchechukwu Nnamdi **Title:** Artificial Intelligence and Spoken Language Pedagogy in Selected Secondary Schools in Southwestern Nigeria	**8. N. Ukaegbu, A. Akubuko, V. Emelogu & P. Adetunji** **Title:** Do AI speech systems preserve lexical tone? Evaluating Igbo Text-to-Speech accuracy	**8. Oluwakemi Olayemi & Abigail Okunola** **Title:** Segmental Variation in Nigerian English Sermons and Its Implications for AI-Based Speech Recognition	**8. Deborah Adejumoke ADEJOBI** **Title:** Phonological (Mis)Representation, Identity, and Persuasion in AI-Mediated Communication Available in Nigeria

ABSTRACTS

Artificial Intelligence versus Human Speech: A Comparative Study of Production and Representation

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It is of no doubt that the emergence and rapid advancement of Artificial Intelligence (AI) have significantly transformed and reshaped human communication. This paper presents a critical comparison between human speech production and Artificial Intelligence (AI)-generated speech. Human speech is produced through the vocal apparatus, while AI generates speech through computational processes. The study adopts a qualitative, descriptive, and comparative research design, drawing on secondary data from academic literature in phonetics, phonology, and AI. Using phonetic and phonological theories; and AI modeling as analytical framework, the study analyzes selected English speech sounds (/θ/, /ð/, /ʒ/, /ʧ/, /ə/, /ʌ/, /ɜː/, /eə/, /ʊə/ and /əʊ/). The findings show that although AI demonstrates high levels of fluency and near-human phonetic precision, it lacks articulatory grounding. AI cannot truly replicate human speech, it only functions as a communicative tool that complements rather than a replacement for human speech. The paper argues and concludes that AI represents speech as acoustic patterns, whereas humans produce speech through physiological processes.

Artificial Intelligence and the Human Speech Sound: A Phonetic and Computational Perspective

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The relationship that exists between artificial intelligence (AI) and human speech sounds has come to be a fundamental area of enquiry central to interdisciplinary research linking linguistics, phonetics, computer science, and cognitive studies. It provides the opportunity for linguists and other language enthusiasts, to explore the impact of AI on the study of human speech sounds. This paper examines how AI systems analyze, process, and reproduce human speech sounds through automatic speech recognition (ASR) and text-to-speech (TTS) technologies. It explores the phonetic foundations of speech production, acoustic modeling techniques, neural network architectures, and the challenges posed by accent variation, tonal systems, and sociolinguistic diversity. The study argues that while AI does not biologically "understand" speech, it models speech acoustics and linguistic patterns probabilistically using data-driven approaches. The paper concludes by highlighting implications for multilingual societies and emerging research in low-resource languages.

Keywords: *Artificial intelligence; Computer; human speech sound; Phonetics; Linguistics*

Phonological Error Patterns in Artificial Intelligence (AI) Transcriptions of TEDx Talks from Nigeria

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This study investigates phonologically driven transcription errors made by three Automatic Speech Recognition (ASR) systems such as YouTube auto-captions, Open AI Whisper, and Google Speech-to-Text when transcribing Nigerian English (Nig.E) speech from five TEDx Nigeria talks totaling 50 minutes. Using Error Analysis and the Perceptual Assimilation Model as frameworks, 10 minutes of audio were manually corrected to create reference transcripts. Mismatches were coded by phonological category of consonant substitution, vowel quality, consonant cluster simplification, and stress-induced lexical confusion. The findings show systematic errors driven by specific phonological features such as /θ/ to /t/ substitutions and vowel mergers, highlighting accent bias in current technology. While Whisper outperformed YouTube's auto-captions, all systems struggled with L1-influenced speech, emphasizing the need for accent-inclusive acoustic models

Keywords: *Automatic Speech Recognition, Nigerian English, Phonological error, Accent bias, TEDx, Error Analysis*

Title: Artificial Intelligence in Coded Communication: Enhancing Security Protocols through Machine Learning Based Cryptographic Systems

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The proliferation of sophisticated cyber threats has exposed vulnerabilities in conventional cryptographic systems, necessitating innovative security solutions. This study will investigate how artificial intelligence can strengthen coded communication through adaptive encryption protocols. The objective is to evaluate machine learning models' efficacy in enhancing cryptographic strength and detecting communication anomalies. Research questions examine: Can AI models outperform traditional encryption methods? What threat detection accuracy can intelligent systems achieve? Grounded in Information Security Theory, the research will employ experimental methodology, testing three AI architectures such as neural networks, deep learning, reinforcement learning, through simulated cyber-attack scenarios across 500 communication channels over six months. Anticipated findings include superior threat detection rates and improved encryption efficiency. The study will recommend implementation strategies for critical infrastructure sectors including finance, healthcare, and government communications.

English Consonant Modifications in Selected AI Generated Short Stories of Some Nigerian Content Creators

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This paper examines how the English consonants are modified in the AI generated short stories of some content creators from the three major Nigerian ethnic groups where English was used as a medium of communication in their contents. Fifteen AI generated short stories were purposively downloaded from the Instagram posts of the selected content creators. The extracted data for the study were perceptually analysed using Chomsky and Halle's Generative Phonology Theory. The data were further analysed quantitatively and qualitatively to identify instances of consonant modifications, their patterns and rates. It was discovered that consonant modifications such as final consonant deletion, stopping, voicing, devoicing, h-factors substitution and dominated the productions of the AI generated short stories of Nigerian content creators. These findings confirm the existence of Nigerian English Pronunciation features in the AI generated short stories of Nigerian content creators which are L2 ways of simplifying English pronunciation challenges.

Key Words: *Consonant modifications, L2 Pronunciation, Content creators, Nigerian Content Creators, Short stories, AI generated stories*

Algorithmic Erosion: Generative AI as a Driver of Mother Tongue Attrition in Hausa

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This study examines generative AI as a driver of mother tongue attrition, using Hausa as a critical case. It introduces algorithmic erosion, the process by which AI systems diminish a language vitality through performance gaps and convenience bias. Framed by Phillipson's Linguistic Imperialism extended to "algorithmic linguistic imperialism," the study employs qualitative critical linguistic analysis. Five generative AI tools were tested on 15 core Hausa elements: 5 lexical items, 5 sentences, and 5 idioms/proverbs. Results reveal systematic failures in pragmatic nuance and cultural accuracy that render Hausa digitally inadequate compared to English, compelling domain shift to English. Generative AI actively drives Hausa attrition, creating a self-reinforcing cycle of data starvation. Algorithmic erosion renders even demographically robust languages digitally fragile. Contextualised, culturally grounded AI development is essential for linguistic diversity.

Keywords: *Algorithmic erosion, Generative AI, Hausa, Mother tongue attrition, Linguistic imperialism*

AI Tools and Language Analytics Software in the Degemination Pattern of Students in Federal College of Education, Abeokuta

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Application of phonological rule plays a crucial role in proper English pronunciation particularly for students of English. Previous studies on the application of phonological rules have focused extensively on how teachers and postgraduate students approximate to SBE, with little or no attention paid to the application of degemination rule in the spoken English of students in College of Education. This study was therefore designed to compare AI tools and language analytics software in the degemination pattern of students in Federal College of Education, Abeokuta. Chomsky and Halle's generative phonology served as the theoretical framework. The descriptive design was adopted. Fifty students of English were purposively selected from Federal College of Education, Abeokuta. Degemination rule production test instrument was administered to the participants and their productions were audio-recorded. The audio version of Natural Reader served as the native baseline. Data were subjected to descriptive statistics and phonological analysis, acoustic analysis and AI analysis.

A Phonetic Analysis of the Acoustic Threshold of AI Visual Prosody in Public Speakers' Rhetorical Emphasis

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Prosody plays a major part in communication and affects how meaning is interpreted in human–human and human–machine communication (Shan, 2021; Hirschberg, 2002). While previous studies have established the role of prosody in communicative intent and highlighted its importance in speech technologies, there has been little attention on how AI transcription systems interpret rhetorical prosody in Nigerian performative discourse. This study investigates the acoustic thresholds that trigger AI-generated visual prosody, focusing on why comparable instances of vocal emphasis do not consistently result in capitalisation. Using a phonetic approach, audio data will be drawn from performative speeches by Paul Adefarasin and Christie Bature. Acoustic analysis will be conducted using Praat to measure Fundamental Frequency (F0), intensity and duration across segments. It is hypothesized that AI transcription systems do not adequately distinguish between aggressive vocal bursts and pragmatic crescendos. The study will therefore explore the gap between acoustic measurement and sociolinguistic intent using Prosody-Pragmatics Interface and Interactional Sociolinguistics theories.

Keywords: *AI transcription, prosody, acoustic thresholds, rhetorical emphasis, Nigerian English, Speech technology*

Multimodal Strategies in AI-Generated Fake News in Digital Communication Ecology in Nigeria

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Advancements in technology have enabled the widespread circulation of AI-generated fake news, increasing the scale and sophistication of misinformation and disinformation on social media platforms with minimal regulatory control. Studies have focused on text-based detection, computational modelling, and visual deepfake analysis, with limited attention to multimodal interaction. This study, therefore, seeks to investigate multimodal strategies used in AI-generated fake news within Nigerian digital communication spaces. A qualitative descriptive research design will be adopted, using selected AI-generated fake news samples from Nigerian digital platforms and analysing them through multimodal discourse analysis to identify recurring linguistic and multimodal strategies employed in their construction. Findings will provide practical implications for fake news detection and media literacy, particularly in identifying linguistic and multimodal markers of AI-generated disinformation in everyday digital interactions.

Appropriateness of AI for Generating Notes on Phonology: Meta AI as a Case Study

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This study examines the appropriateness of AI for generating phonology notes, using Meta AI as a case study. Interactions with Meta AI across sessions revealed that, while the system produces detailed explanations of complex phonological concepts, such as the English Sound System and English Stress, and others, its outputs are not error-free. Users without prior background knowledge risk internalising subtle inaccuracies in description, feature specifications, rule formulations, and more. Effective engagement, therefore, demands domain expertise and readiness to identify and correct the model's mistakes. Over time, this Meta AI has shown measurable advances in accuracy, coherence, and citation practice, reflecting ongoing updates to Muse Spark since its April 2026 launch. Nevertheless, these improvements do not eliminate the need for critical use. The findings underscore that AI should function as a supplementary tool rather than an authoritative source. Users must independently verify claims, searches, and deliberately interact with the model to ensure pedagogical and scholarly reliability.

Bridging the Gap: Human Speech and Artificial Intelligence

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Recent advances in artificial intelligence have enabled machines to process and generate language with remarkable fluency. Speech recognition systems, natural language processing models, and conversational agents increasingly participate in communicative exchanges that resemble human dialogue. Despite these developments, significant distinctions remain between human speech and machine- generated language. Human communication involves not only grammatical structure but also context, cultural knowledge, intentionality, and social interaction, whereas artificial intelligence systems rely on statistical patterns derived from large datasets. This paper examines the relationship between human speech and artificial intelligence by exploring how contemporary AI technologies approximate human communication while remaining fundamentally different from it. Drawing on linguistic theory, discourse analysis, and current debates in artificial intelligence, the paper argues that AI systems simulate linguistic competence but lack the pragmatic and cognitive capacities that characterise human communication. The study highlights both the possibilities and limitations of current speech technologies and suggests that meaningful progress in human–machine interaction will require interdisciplinary collaboration.

Keywords: *Human Speech, Artificial Intelligence, Speech Technologies, Machine-generated Language, Datasets*

Artificial Intelligence Technology in Spoken Communication Pedagogy: An Evaluation

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The integration of artificial intelligence (AI) into language education has significantly transformed the processes of language learning and spoken communication. This study investigates the impact of AI-driven technologies—such as conversational agents, speech recognition systems, and adaptive learning platforms—on learners' spoken communicative competence. Adopting a mixed-method research design, data were collected from 120 undergraduate students using AI-assisted language learning tools over a six-week period. Findings reveal that AI technologies enhance pronunciation accuracy, fluency, and learner confidence while reducing speaking anxiety. However, concerns regarding authenticity, overdependence on technology, and digital inequality persist. This paper argues that while AI represents a transformative force in language pedagogy, its effectiveness depends on balanced pedagogical integration and human mediation. The study concludes that AI has the potential to redefine spoken communication practices but must be implemented ethically and contextually.

Keywords: *Artificial Intelligence, Language Learning, Spoken Communication*

Artificial Intelligence and the Analysis of Phonological Variations in Nigerian English

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The study investigates the application of Artificial Intelligence (AI) in analysing phonological variations in Nigerian English within the context of increasing global digitisation of language. Despite extensive documentation of phonological variability influenced by indigenous languages, systematic computational analysis remains limited. This study aims to examine how AI tools, particularly automatic speech recognition and machine learning models, can identify, classify, and interpret phonological patterns among Nigerian speakers. Anchored in Variationist Sociophonology and Natural Phonology, the study adopts a mixed-method approach, combining corpus-based speech data with AI-driven acoustic modelling. Findings reveal that AI systems effectively detect segmental and suprasegmental variations, including vowel reduction, consonant substitution, and prosodic shifts, while also highlighting challenges associated with low-resource language data. Evidence further shows that AI improves large-scale phonological analysis and pattern prediction. The study concludes that integrating AI into phonological research enhances descriptive accuracy, scalability, and pedagogical applications in Nigerian English.

Keywords: *Artificial Intelligence (AI), Nigerian English, Phonological Variation, Speech Recognition, Machine Learning*

Exploring the Effectiveness of Artificial Intelligence in the Analysis of Segmental and Suprasegmental Features of Spoken English

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This study examines the effectiveness of Artificial Intelligence (AI) in analysing segmental and suprasegmental features of spoken English. The study adopts a descriptive survey design combined with experimental phonological analysis. 20 lecturers were purposively selected from English, Communication, Linguistics and Theatre Arts for the study based on their competence in their spoken English. The data were collected using structured questionnaires and speech recordings read passages, spontaneous and conversational speeches. The data were analysed with AI-based systems, comparing outputs to human expert annotations. Findings revealed high accuracy of AI in segmental feature detection (91%) and slightly lower accuracy for suprasegmental features (81%), with a strong positive correlation with human analyses. The study concludes that although AI can significantly enhance phonological analysis especially at the segmental level, human expertise remains essential for complex suprasegmental features, recommending integration of AI in research and language teaching.

Key words: *Artificial Intelligence, Segmental features, Suprasegmental features, Phonological analysis, spoken English*

AI-mediated Multimodal Communication and Its Implications for Language, Identity, and Culture

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This study examines AI-mediated multimodal communication and its implications for language, identity, and culture in contemporary digital environments. The paper explores how AI-driven tools—such as chatbots, speech recognition systems, and generative approach reshapes linguistic practices by fostering hybridity, code-switching, and the integration of semiotic resources. It further explores how these multimodal forms influence identity construction, enabling users to negotiate multiple, flexible identities across digital spaces. Participants include 30 active users of AI-mediated communication platforms, purposively selected to represent diverse age groups, linguistic backgrounds, and cultural contexts. The study employs a qualitative approach, combining digital ethnography, corpus-based sampling of AI-driven communications, and semi-structured interviews. Multimodal data—including text, images, and AI-generated content are systematically collected and analysed. Findings indicate that while AI enhances communicative efficiency and creativity, it also challenges conventional understanding of authenticity, authorship, and cultural ownership, highlighting the need for inclusive, ethical, and culturally informed communication practices.

Keywords: *Artificial Intelligence, Multimodal, Culture, identity, Communication, Language*.

Analysing Humour in Ai-Generated Dramatised-Children's Speech on Facebook

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This paper investigates the recreation of humour in AI-generated reels for children on Facebook. It aims at identifying the humour-evoking language strategies employed in AI-generated children's contents on Facebook. The data were sourced from 5 Facebook platforms comprising *Living with Mal, Malemala Morongwa, Graceliving, Scalewisegig and Baby Pop TV*. These platforms were selected because they contain series of AI-generated children's utterances. The selected data were listened to and transcribed to identify some of the linguistic features that evoke funniness in them. Insights from Incongruity Theory of humour were used in describing the data. Findings from the data revealed that some of the linguistic humour-evoking strategies include witty language and tone shifts, violation of children language delivery style, funny adult-like character voices and wordplay. The study concludes that AI generated children's utterances on Facebook are contents that are capable of engaging both adults and children leveraging on incongruity theory of humour.

Keywords: *AI-Generated, incongruity, humour, tone shifts, Facebook*

Topic: Artificial intelligence and mother tongue attrition: A case study of youths in secondary schools

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This study investigates the far-reaching effects of AI in making learners to forget, or to save their native languages, and how this affects communication. Our subjects are 50 youths, drawn from five private secondary schools in Lagos. Language Attrition theory is used to explain loss of language over time. Descriptive survey design is used for data collection using questionnaires and interviews. 20 structured sentences are used to elicit responses on the influence of AI over native languages. Findings show that, frequent use of AI tools, promotes greater reliance on AI dominant language and reduces use of indigenous languages, there by accounting for the gradual attrition of mother tongue. The study submits that while AI contributes to reduced use of indigenous languages, AI tools can also be utilized for, translation from AI, English, to indigenous languages. Thus, AI not only contributes to the attrition of indigenous languages, but also upholds advancement of mother tongue.

Keywords*: Artificial Intelligence, Mother Tongue, Attrition, Language Attrition Theory*

Impact of Artificial Intelligence on Educated Spoken Nigerian English: A Study of South-South Nigeria

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Artificial Intelligence (AI) is gradually influencing spoken English among educated Nigerians, especially through tools that enhance pronunciation and fluency of English language. This study investigates its transformative impact on the phonological, lexical and syntactic features of Educated Spoken Nigerian English (ESNE) within the South-South geopolitical zone of Nigeria. As AI-driven tools from Voice Assistants to Language Models (ChatGPT, Speakometer) and Computer-Assisted Pronunciation Training (CAPT) softwares become prevalent in Nigerian academic and professional domains, they introduce a "digital standardization" that mostly promotes Western accents. Using a descriptive research design, this paper examines how speakers in South-South urban hubs (Port Harcourt, Benin City, and Uyo) adapt their speech patterns to interact effectively with AI systems. While AI enhances communicative efficiency and global intelligibility on one hand, it poses a risk of eroding regional linguistic identity markers on the other hand. The paper concludes that AI has both the benefit of serving as a 'catalyst for linguistic evolution'.

Modelling Suprasegmental Features in Second Language Acquisition using Artificial Intelligence

Evelyn Uko-Eninn

The perception and fluidity of speech in a second language (L2) heavily depend on suprasegmental elements like stress, intonation, rhythm, and tone. Conventional teaching approaches often depend on instructors' subjective assessments and minimal practice opportunities, which may not be tailored to each learner's unique requirements. This research examines how Artificial Intelligence (AI) can be employed to model these suprasegmental features, offering objective evaluations and personalized guidance in L2 learning. By utilizing a blend of machine learning algorithms and speech recognition technologies, AI can scrutinize a learner's speech to recognize patterns in stress, intonation, and rhythm, identifying deviations from native speaker standards. Additionally, the study assesses how feedback generated with AI assistance can enhance learners' pronunciation and prosody. This research merges computational methods with pedagogical strategies, presenting an efficient and accurate strategy for teaching suprasegmentals, thereby boosting learner confidence and overall fluency. The outcomes suggest avenues for creating AI-powered language learning resources and deepen our knowledge of technology's role in mastering the intricate elements of L2 acquisition.

Keywords: *(Suprasegmentals, Second Language Acquisition, Artificial Intelligence, Stress and Intonation, Machine learning, Speech analysis) remain implicitly or explicitly present*

Artificial Intelligence and Dyslexia Management in Schools

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Dyslexia, a neurocognitive reading disorder, impairs learners' abilities in decoding, spelling, and comprehension, thereby affecting academic performance. Traditional interventions, though beneficial, are often limited in scalability and responsiveness to individual learner differences. This study examines the role of Artificial Intelligence (AI) in dyslexia management within school contexts, focusing on early detection, adaptive intervention, and personalized learning support. Grounded in the Generative Adversarial Phonology framework, a descriptive survey design was employed. Data were collected through a structured questionnaire administered to fifty participants, including educators, researchers, and school administrators, and analyzed using descriptive statistics. Findings indicate increasing awareness of AI-driven tools such as speech-to-text systems and adaptive learning platforms, alongside recognition of their potential to enhance individualised learning outcomes. However, challenges related to infrastructure, data privacy, ethical considerations, and teacher preparedness remain significant. The study highlights the need for policy alignment and capacity-building to support effective AI integration in inclusive education.

Analysis of AI Mouth Diagrams in Vowel Pedagogy: A Study of Visual-Spatial Feedback in Undergraduate ESL Classrooms

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This research examines the shift from audio-based imitation to visually enhanced instruction in teaching vowel sounds, focusing on the /i/ (Vowel 1) and /ɪ/ (Vowel 2) contrast. The study draws on the Lingua Franca Core (LFC) and places a greater emphasis on communicative intelligibility than accent imitation. This study employed a quasi-experimental approach with 40 university English as second language students, divided into a control group (audiovisual instruction) and an experimental group (3D mouth diagrams generated through AI) The AI-based platform offered visualisations of tongue height, jaw position, and lip rounding to overcome auditory "phonetic blindness". These data are gathered through pre- and post-tests, and assessed using perceptual ratings and acoustic analyses with Praat. Results show AI-generated visuals greatly improve learners' production of target vowel sounds through bio-feedback. It demonstrates that 3D articulatory interventions in spoken pedagogy leads to increased self-responsibility and provide a viable and novel way to achieve phonetic clarity in today's globalised language classes.

Keywords: *Vowels, monophthongs, AI, Second Language, pronunciation*

AI Tools and Language Analytics Software in the Degemination Pattern of Students in Federal College of Education, Abeokuta

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Application of phonological rule plays a crucial role in proper English pronunciation particularly for students of English. Previous studies on the application of phonological rules have focused extensively on how teachers and postgraduate students approximate to SBE, with little or no attention paid to the application of degemination rule in the spoken English of students in College of Education. This study was therefore designed to compare AI tools and language analytics software in the degemination pattern of students in Federal College of Education, Abeokuta. Chomsky and Halle's generative phonology served as the theoretical framework. The descriptive design was adopted. Fifty students of English were purposively selected from Federal College of Education, Abeokuta. Degemination rule production test instrument was administered to the participants and their productions were audio-recorded. The audio version of Natural Reader served as the native baseline. Data were subjected to descriptive statistics and phonological analysis, acoustic analysis and AI analysis.

The Future of Spoken Language Pedagogy: Artificial Intelligence (AI), Automation and Human Agency

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The rapid advancement of AI and automation technologies is transforming educational practices globally, with spoken language pedagogy experiencing significant changes. AI-driven tools such as speech recognition systems, automated pronunciation assessment, conversational agents, and intelligent tutoring systems are increasingly integrated into language classrooms. While these technologies offer enhanced personalisation, scalability, and real-time feedback, they also raise critical concerns regarding the diminishing role of human agency in teaching and learning. This study explores the evolving relationship between AI, automation, and human agency in spoken language pedagogy, emphasising the need for a balanced, human-centered approach. Drawing on constructivist learning theory, sociocultural theory, and human-AI interaction frameworks, the paper examines how AI can complement rather than replace teachers and learners in spoken language development. The study highlights pedagogical, ethical, and professional implications, arguing that the future of spoken language pedagogy lies in synergistic collaboration between intelligent technologies and human expertise rather than technological determinism.

Keywords: *Spoken language pedagogy, Artificial intelligence (AI), Automation technologies, Synergistic collaboration, Professional implications*

Phonology and Artificial Intelligence: The Effects of Pronunciation Errors on Speech Recognition and voice Typing Accuracy

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This study examines how pronunciation errors in phonology affect speech recognition and voice typing systems in artificial intelligence. It explores how variations in accent, stress, and speech sounds influence machine understanding of spoken language. The study is guided by the Speech Perception Theory, which explains how spoken signals are decoded despite distortion. A qualitative method is adopted through descriptive analysis of spoken samples and existing literature on AI speech systems. Findings show that speech recognition tools still struggle with pronunciation differences, especially among non-native speakers, leading to transcription errors such as wrong vowels, consonant substitution, and rhythm changes. The study concludes that pronunciation errors reduce accuracy and recommends more diverse training data to improve AI performance and inclusivity in voice-based technologies.

Keywords: *Phonology, Artificial Intelligence, Pronunciation Errors, Speech Recognition, Voice Typing*

AI Read Aloud vs. the Human Reader in a Non-Native English Environment: The Intelligibility Question

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Read aloud technology is an Artificial Intelligence (AI)-powered tool that converts written texts to spoken human-like audio. In recent times, it has served as an instructional strategy, revolutionising literacy for young learners and adults alike, particularly in the area of pronunciation and comprehension. In this study, using a 500-word text, an acrolectal non-native speaker of English and fifty respondents (all postgraduate students of English), we investigate the intelligibility of the Microsoft Edge Read Aloud command vis-a-vis the natural voice of a human speaker. The findings reveal that the AI voice option is devoid of the natural emotional tone which characterizes connected speech in its realisation of certain grapho-phonemic features, including speech pacing, liaison, weakening and intonation - and this accounts for its low intelligibility. The study, thus, submits that while read alouds approximate human speech, they can never replace it. It upholds the uniqueness of speech to the human species.

Keywords: *Artificial Intelligence, Read aloud, text-to-speech (TTS), intelligibility*

Artificial Intelligence and Phonological Explanation: Typologies from Nigerian English Data

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This paper examines Artificial Intelligence and Phonological Explanation: Typologies from Nigerian English Data. It investigates whether the predictive strength of artificial intelligence can perform the same explanatory role as phonological theory in speech analysis. The study aims to assess the relationship between AI and phonological explanation, identify the limits of machine-based prediction, and show the relevance of Nigerian English data to current phonological debates. A qualitative descriptive method was adopted through the analysis of documented phonological patterns in Nigerian English. The study is grounded in Generative Phonology, Optimality Theory, and Kiparsky's concept of explanatory adequacy. Data examined include consonant cluster simplification, dental fricative substitution, vowel neutralization, and stress variation. Findings show that AI can detect and predict recurring pronunciation patterns, but it does not sufficiently explain the structural and cognitive reasons behind them. The paper concludes that phonological theory remains essential, while AI is best used as a supporting analytical tool.

Keywords: *Artificial intelligence, phonological explanation, Nigerian English, Generative Phonology, Optimality Theory, Kiparsky*

Phono-Critical Discourse Analysis of AI Pronunciation and the Revoicing of Yoruba and Igbo Indigenous Anthroponyms, Toponyms, and Cultural Expressions

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This study addresses that gap by proposing Phono-Critical Discourse Analysis (Phono-CDA) as an extension of Critical Discourse Analysis, with particular attention to sound as a meaningful site of discourse where issues of power, identity, and inequality are negotiated. The analysis focuses on the pronunciation of Nigerian place names, personal names, and other indigenous expressions in AI-narrated digital storytelling and drama, where such forms appear naturally within narrative contexts. The findings show recurring distortions in tonal realisation, largely reflecting anglicised pronunciation patterns that weaken the phonological distinctiveness of Yoruba and Igbo. In effect, these patterns reinforce the dominance of English in digital spaces and contribute, albeit subtly, to the marginalisation of indigenous languages. The study therefore argues for more linguistically inclusive AI systems that can better accommodate the phonological features of indigenous languages, especially in the rendering of culturally significant names and expressions.

Keywords: *Artificial Intelligence, Phono-Critical Discourse Analysis, Tone realisation, Text-to-speech (TTS), Yoruba, Igbo phonology*

Intelligibility of Yoruba English to WhatsApp Transcriptor

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WhatsApp transcriptor is an AI tool which transcribes WhatsApp voice messages to text; it was introduced to improve communication among users and programmed to recognize voice messages in English language. Previous studies have explored the role of AI in language teaching and learning. This study investigated the degree of intelligibility of Yoruba English to WhatsApp transcriptor. Twenty speakers of Yoruba English were purposively selected for this study. Each participant was asked to read a prepared text into a voice note; the voice notes were transcribed using WhatsApp transcriptor and analysed to check the degree to which Yoruba English is intelligible to WhatsApp voice transcriptor. The result of the study reveals that whatsapp transcriptor is not adequately equipped to intelligibly transcribe speeches of speakers of Yoruba English.

Key words: WhatsApp transcriptor, Artificial Intelligence, Yoruba English, new Englishes, intelligibility.

Melodic Features of Ibibio Riddles

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This study is interdisciplinary, focusing on the interface between phonology and music. The research methodology employs survey technique. The data were collected from selected consultants who were identified as custodians of Ibibio culture in their respective local communities. Two local government areas were selected for data collection. The analysis was carried out using Sibelius (a musical software) which allows the user to create, print and play back sheet music. Ibibio riddles were classified based on types, using their structural and functional components as criteria. The results show that Ibibio riddles have characterised melodic features such as rhythm, form and aesthetics, syllable/syllabification, scale, improvisation and performance. In this study musical notes of the melodic tones of Ibibio riddles are developed. Approximately, one hundred and eighty (180) riddles were collected and classified based on structure and function. Findings show that Ibibio riddles belong to the poetry genre of literature. Its rhythmic feature makes this artifact fun for children to play with and add coloration as an interlude during folktales and folksongs sections.

Acoustic Correlates of Vowel Intrusion in the English of Educated Hausa Speakers: A Sociophonetic Study

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This study investigates the acoustic and sociophonetic characteristics of vowel intrusion in the English of educated Hausa speakers. Previous studies have described this phenomenon, yet, there is limited empirical research examining its acoustic realisation. Drawing on insights from acoustic phonetics and sociophonetics which are grounded in Interlanguage Theory, this study adopts a mixed-methods approach. Data will be collected from educated Hausa English speakers through word lists, carrier phrases, and spontaneous speech. Acoustic analysis will be conducted using Praat to measure formant frequencies (F1, F2) and duration of intrusive vowels. The study aims to identify the phonological environments that trigger vowel intrusion, determine the quality and consistency of inserted vowels, and examine variation across speech styles. Findings are expected to demonstrate that vowel intrusion is systematic and phonetically measurable rather than random error, reflecting both L1 transfer and sociophonological identity. The study contributes to research on Nigerian English phonology and provides empirical support for the integration of acoustic methods in the study of second-language phonological processes.

Substitution of /s/ with /ʃ/ in the Accent of Some Ogbia Speakers of English: A Sociophonetic Perspective

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This study is an assessment of the accent of some Ogbia speakers of English from a sociophonetic point of view. It observes that some speakers alternate /s/ for /ʃ/ at different positions of some English words. Data for the study were collected through direct interview where selected speakers whose consents were sought, were asked to pronounce English words with /s/ at different word positions. The findings of the study reveal that some Ogbia speakers of English substitute the voiceless alveolar fricative /s/ with the voiceless palato-alveolar fricative /ʃ/ in the pronunciation of English words. The study observes that the alternation is not a case of mother tongue interference, which is usually the case with non-native speakers of English as they tend to transfer sounds from their native language into English. In this situation, there is no voiceless palatal consonant in the sound system of Ogbia which could interfere with the pronunciation of English words the voiceless alveolar fricative.

Keywords: *Ogbia, Accent, Sociophonetic, Voiceless Alveolar Fricative, Voiceless Palato-Alveolar Fricative*

An Acoustic Study of English Lateral Consonant /l/ in Educated Nigerian English

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This study attempts an acoustic analysis of the varying realisations of the lateral consonant /l/ in Educated Nigerian English (ENE) in relation to ethnicity, gender, and age. 30 speakers, evenly stratified by ethnicity (Hausa, Igbo, and Yoruba), gender (male and female), and age (young and adult) produced fifteen target words within the carrier phrase "I meant X", where X was a word with the consonant /l/ in word-initial and word-final (pre-consonant and pre-vocalic) positions. The data will be orthographically transcribed using Whisper-X in WebMAUS, annotated and time-aligned with Montreal Force Aligner, and extracted into R Studio using a Praat script for analysis and plotting. Speakers' realisations will be determined based on varying formant dynamics across the lateral /l/ (higher F2-F1 for initial laterals and lower F3-F2 for final laterals). The findings will contribute to the acoustic description of lateral /l/ in the ENE variety.

Keywords: Clear /l/, dark /l/, Educated Nigerian English, lateral, social variable

Accent, Dialects and Google Speech Translation: Implication for Spoken Communication

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Accent and dialectal variation remain central challenges in spoken communication, particularly in multilingual societies. With the growing reliance on automated speech technologies such as Google Speech Translation (GST), concerns have emerged regarding the system's ability to accurately recognize, process, and translate diverse accents and dialects. This study examines the interaction between accent, dialect, and GST, focusing on their implications for effective spoken communication. Drawing on sociolinguistic theory, speech recognition research, and AI models, the study explores how phonological variation, suprasegmental features, and regional speech patterns influence translation accuracy and communicative effectiveness. Speech technologies tend to privilege standardised accents, often marginalizing non-native, regional, and Global South varieties of English. This paper argues that while Google Speech Translation enhances accessibility and cross-linguistic communication, accent and dialect bias may hinder inclusivity and communicative equity. The study contributes to ongoing discourse on AI-mediated communication and highlights implications for education, intercultural communication, and language policy.

Keywords: *Accent, Dialects, Google Speech Translation, Spoken Communication, Language Policy*

Vowel Lengthening in Nigerian English

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Despite the sufficiently large body of literature on Nigerian English (NE), a principled account of why the speakers of NE lengthens the vowels in such words as "[ve:ri] tall", "the house is [bi:g]", "I had a [lɔ:ŋ] day", etc. where the target vowels are canonically short, has not received much attention. This gap is what the present study intends to fill. Data for the study were gathered from two major sources: the mass media and live conversations at different domains of communication. Words containing phonetically lengthened vowels were purposely extracted from the corpus, and the paper's descriptive analysis is premised on the formal apparatus of Cognitive Linguistics and Prosodic Phonology. The major finding of the study is as follows: Driven by the need to concretize their cognitive perception of the entity being described, Nigerian speakers of English lengthen an otherwise short vowel of the given word. and, in other instances, "further lengthen" an already long vowel in order to vividly and "satisfactorily" describe the attribute of the given entity.

***Keywords*:** *Nigerian English, Cognitive Linguistics, Prosodic Phonology, Vowel Lengthening, Super Long Vowels*

A Different Approach to Discourse: Experimenting with Interactions of LLMs with Humans for Teaching English Phonology

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English phonology is essential for effective language acquisition in Nigeria, yet its instruction faces persistent challenges, including limited class time, inadequate language laboratories for large cohorts, and shortages of specialised teachers. This study explores the integration of large language models (LLMs) as interactive tools to support phonology teaching. Employing a proposed framework, Artificial Intelligence Discourse Analysis (AIDA), the research systematically analyses conversational interaction data between students and LLMs, focusing on structured dialogues for segmental phonology practice, feedback, and error correction. Through a mixed-methods exploratory design, the study assesses the pedagogical viability and effectiveness of LLMs in addressing resource constraints. This investigation contributes to innovative, scalable solutions for pronunciation pedagogy in resource-limited multilingual contexts.

Age-Related Variation in Speech Articulation: A Phonetic and Phonological Analysis of Young and Older Nigerian English Speakers

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This study investigates age-related variations in speech articulation among Nigerian English speakers. It compares young adults (18–35 years) and older adults (65+ years) to examine how physiological and cognitive changes associated with aging influence articulatory precision, fluency, and segmental production. Grounded in Speech Motor Control Theory, the research aims to distinguish normal age-related phonetic changes from pathological conditions in the Nigerian English context. Using a qualitative approach, data were collected through structured questionnaires and speech-based assessments among participants in an urban Nigerian community. Findings reveal that older speakers show increased consonant imprecision, segmental omissions, temporal disfluencies, and reduced vocal intensity, often linked to hearing loss and dental challenges, while younger speakers exhibit greater articulatory stability and fluency. The study advocates for context-sensitive speech intervention strategies in Nigerian English.

Keywords: *Age-related variation, speech articulation, Nigerian English, phonetics and phonology, articulatory precision, speech motor control*

From L2 to L1: Phonological Transfer Effects of English on Nigerian Indigenous Languages

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Interference is no longer an indigenous phonological error but has become a phonological concept that can feature either from L1 to L2 or vice versa. This study will examine the phonological influence of English on the pronunciation of selected Nigerian indigenous languages among bilingual undergraduates. Prior research emphasised L1 interference in English, focusing on reverse transfer (L2-to-L1) where sustained English use shapes indigenous language phonology. Guided by bidirectional cross-linguistic influence and Speech Learning Model, this study adopts a qualitative descriptive design involving fifteen bilingual students from Covenant University. Data from recorded speech samples will be analysed to identify deviations such as vowel modification, consonant substitution, tonal weakening, and stress substitution. Findings are expected to reveal systematic patterns of English-induced phonological interference, particularly among English-dominant speakers. The study contributes to bilingualism and language contact research and underscores the implications of English dominance for indigenous language maintenance in Nigeria.
Keywords: *Reverse phonological interference, cross-linguistic influence, phonological transfer, bilingualism, English dominance, Nigerian indigenous languages*

L1 Transfer in L2 Phonology: The Influence of Ogbia language on English Pronunciation

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This study investigates the influence of first language (L1) phonology on second language (L2) pronunciation among Ogbia speakers learning English. Grounded in Second Language Acquisition and phonological transfer, it examines how structural differences between Ogbia and English shape learners' phonological output. Data were collected through recorded word lists and spontaneous speech from Ogbia-English bilinguals. Findings reveal systematic substitution patterns linked to gaps in the Ogbia phonemic inventory, including the realization of /t͡ʃ/ and /d͡ʒ/ as /s/ and /z/, /ʃ/ as /s/, and /θ/ and /ð/ as /t/ and /d/. Additional features include vowel epenthesis, consonant cluster reduction, and stress patterns influenced by Ogbia tone. These patterns reflect simplification strategies and avoidance of unfamiliar sounds. The study concludes that L1 phonology significantly shapes L2 pronunciation and recommends incorporating these insights into pronunciation teaching to improve learning outcomes.

Synthetic Analysis of Acquisition of Phonics Skills towards Sustainable Letter Sound Development and Pronunciation for Child Development in Adamawa State, Nigeria

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The study aimed at determining the effectiveness of synthetic instructional method of teaching phonics over the conventional (look and say) method on the acquisition of phonics skills. Acquiring phonics skills is a major requirement for correct letter-sound and words pronunciation. Three (3) specific objectives with corresponding research questions were formulated to guide the study. The population comprised of 200 primary one pupils with a sample size of 135 pupils drawn from the four (4) intact classes in (4) local government areas. Simple random sampling was used to select the primary schools. Two instruments (phonics awareness diagnostic test and phonics skill acquisition test) were used. Result revealed that synthetic phonics instructional strategies were more effective than the conventional method of teaching phonics for the pupils at the foundation level progressed systematically to the instructional level while those who are previously at the instructional level to pronounce three- and four-letter words independently.

Key words: *Language, synthetic pronunciation, acquisition skills, child*

Artificial Intelligence-Assisted Acoustic Analysis of Segmental and Suprasegmental Features in Educated Nigerian Spoken English

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This study investigates the application of AI-assisted acoustic analysis in the examination of segmental and suprasegmental features of Educated Nigerian Spoken English (ENSE). The study adopts an instrumental phonetic approach using AI-driven speech processing tools such as Praat, automatic speech recognition systems, machine learning algorithms and speech corpora technologies to analyse vowels, consonants, stress, rhythm, and intonation patterns among educated Nigerian speakers of English. Twenty educated speakers drawn from major Nigerian ethno-linguistic backgrounds were purposively selected. Speech samples were recorded and subjected to acoustic analyses involving formant frequencies, pitch contours, duration measurements, intensity and spectrographic interpretations. Findings reveal that AI-assisted tools boost accuracy, objectivity, and speed in phonological analysis while also exposing recurring phonological patterns peculiar to Nigerian English. The study further establishes that suprasegmental variations in ENSE are influenced by mother tongue interference, speech accommodation, and sociolinguistic variables.
Keywords: Artificial Intelligence, Acoustic Analysis, Nigerian English, Segmental and Suprasegmental Features, Speech Technology

Phonetic Proximity versus Semantic Intent: The Cognitive Architecture of Malapropism

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This study investigates the tension between phonetic proximity and semantic intent in the production of speech errors, with particular focus on malapropism. Drawing on models from psycholinguistics, the paper examines how competing activation levels within the mental lexicon which leads to the selection of phonologically similar but semantically inappropriate item. While the lexical selection by competition model suggests that semantic intent acts as the primary driver for word retrieval, the frequent occurrence of malapropisms – phonetically similar but semantically unrelated substitutions – indicates a vulnerability in the cognitive architecture. This study is descriptive. It is both quantitative and qualitative with a sample population of about one hundred and twenty (120) respondents. To ensure a comprehensive analysis of the cognitive architecture, the study utilizes a stratified purposive sampling approach. The findings suggest that phonetic proximity can override semantic constraints when cognitive load is high.

Key Words: *Phonetic Proximity*, *Semantic Intent*, *Cognitive Architecture*, *Malapropism*

Speech-to-Text Analysis of Phonological Nuances in the International Corpus of English-Nigeria

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This paper examines speech-to-text (STT) phenomena in the parliamentary debates and broadcast talks of the International Corpus of English–Nigeria (ICE-Nig). Studies on the accurateness of auto-generated translations of World Englishes by Artificial Intelligence (AI) applications are still scarce. The purpose of this study therefore, is to establish the faithfulness or otherwise of STT apparatus to translating Nigerian English phonological nuances it receives. The phenomena to be investigated include exclamation, filled pauses, false starts, pseudo-English, phonemic contrast or variation, syllable omission, duplication and pitch heights. The data will be drawn from twenty (20) parliamentary debates and forty-three (43) broadcast talks recorded in ICE-Nig. The recorded speeches will be subjected to perceptual and acoustic analysis using *PRAAT* and *ELAN* speech analyzing tools. Theoretical insights will be drawn from the Optimality theory in order to compare the (in)felicity of STT output to the received input.

Nigerian Pidgin Communication Encounters in Performance

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This paper explores the dynamic part of Nigerian Pidgin (Naija) as a performed communication skill in contemporary Nigerian society. Nigerian Pidgin, often referred to as "Naija," has evolved from an ordinary contact language into an important linguistic tool that transcends ethnic, social, and educational boundaries. This research examines how Nigerian Pidgin (Naija) performs it's role within various performance contexts, including film industries, theatre, comedy (Standup Comedians), music, street performances, and everyday social interactions, to interact, build solidarity, and express cultural identity. The study used qualitative analysis of performance texts, home videos downloaded from You Tube, they were played back with VLC player and subjected to perceptual analysis, this study demonstrates how Nigerian Pidgin serves as a bridge between performers and diverse commentators/audiences, enabling communication easy and simultaneously accessible, entertaining, and culturally reasonable. The findings show that performers strategically use Nigerian Pidgin to achieve various communicative goals including humour generation, social commentary, identity construction, and emotional connection with audiences.

Keywords: *Nigerian Pidgin, Communication Encounters in Performance*

From Voice to Screen: The Digitisation of Oral Literature in Contemporary Nigeria

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This study examines the transformation of oral literature in contemporary Nigeria through the processes of digitization and digital media integration. Drawing on interdisciplinary perspectives from literary studies, digital humanities, and cultural studies, this paper explores how digitization functions both as a mechanism for preservation and as a catalyst for innovation. The research argues that while digital technologies enhance the accessibility, documentation, and global reach of oral traditions, they simultaneously alter their performative essence, audience interaction, and socio-cultural meanings. Through case study of Hausa digital storytelling practices, the study reveals the emergence of hybrid narrative forms that blend oral aesthetics with multimedia elements. However, it also highlights critical challenges, including the erosion of traditional storytelling contexts, issues of authenticity, and unequal access to digital tools among rural communities. The paper posits that the shift from voice to screen represents not merely a technological transition but a cultural reconfiguration of narrative authority, memory, and identity in Nigeria.

Keywords: *Contemporary, Digital, Digitisation, Hausa, Oral Literature*

Oral Literature and Digitising Literary Thoughts

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This study examines the intersection of traditional oral literature and modern digital preservation techniques. As oral traditions face potential erasure in a globalized society, the purpose of this research is to evaluate how digitizing literary thoughts can safeguard cultural heritage while maintaining the performative essence of storytelling. Utilizing a qualitative research methodology, the study analyses various digital archiving platforms and their effectiveness in capturing nuances such as tone, rhythm, and audience interaction inherent in orality. Preliminary findings suggest that while technology offers unprecedented reach, it requires specific ethical frameworks to ensure indigenous intellectual property is protected. This paper proposes a balanced framework for digital transition that empowers traditional narrators within a high-tech ecosystem.

Keywords: *Oral Literature, Digitization, Cultural Preservation, Storytelling, Digital Archiving*

Oral Literature and Digital Literary Thoughts: Preserving Indigenous Narratives in the Digital Age

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Oral literature represents one of the earliest forms of literary expression in human societies. It includes folktales, proverbs, riddles, chants, songs, and myths transmitted across generations through verbal performance. In African societies, oral literature functions as a repository of cultural history, social values, and communal identity. However, the emergence of digital technologies has significantly transformed the ways in which oral traditions are preserved, studied, and disseminated. This paper examines the intersection between oral literature and digital literary thought, focusing on how digital platforms facilitate the preservation and transformation of indigenous narratives. Using examples from Anaañ oral traditions, the study demonstrates how digital archiving, multimedia storytelling, and social media platforms contribute to safeguarding oral heritage while simultaneously reshaping narrative practices. The paper also discusses the methodological contributions of the field of Digital Humanities to the study of oral literature. It concludes that digital technologies provide innovative opportunities for preserving endangered oral traditions.

Keywords: Oral literature, digital humanities, African oral tradition, Anaañ narratives, digital storytelling, cultural preservation.

The Use of Phonoaesthetics and Cultural Symbolism in "Sorry": A Case Study of Mohbad's Song

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This research investigates how Mohbad, a popular late Nigerian Afro beats artist, uses the potential of phonoaesthetics to create a profound emotional relationship with his audience through his song "Sorry." Although it is known that music has a strong emotional effect in Nigeria, there is little knowledge on how specific sound techniques within Afrobeats lyrics contribute to this emotional bond. The researcher's study is based on the process of closely listening to the "Sorry" song by Mohbad and underlines the use of rhyme patterns, alliteration, and assonance. These elements are examined using phonoaesthetic theory to uncover their possible emotional effects and cultural symbolism. The study is descriptive and qualitative. The analysis shows how Mohbad skillfully uses sound elements in his music to create an atmosphere that enhances the nuances of struggle and longing found in "Sorry."

Keywords: *Afro beats, emotional, aesthetics, sounds*

Speech to text: The Phono-Semantic Implications of AI Interpretation of Ibibio English

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The study explores the discrepancies in speech-to-text technology using data from Ibibio-English speakers. It specifically focuses on the Phono-semantic implications of the contrastive features of English and Ibibio consonantal systems on the spoken English of Ibibio-English bilinguals. Using a survey method, ninety 100-level students Ibibio-English bilinguals in Akwa Ibom were sampled. Recorded utterances were transcribed using OpenAI's Whisper to evaluate AI speech-to-text accuracy. The output was checked against intended utterances to identify phono-semantic mismatches. The Generative concept of phonological processes was explored, alongside morphophonemic rules, to identify how the Ibibio consonantal pattern reshapes English forms. The study shows that such contrasts lead AI to misinterpret lexical items, causing semantic shifts. Findings show that AI models lack adequate training on Ibibio phonological features, resulting in skewed text outputs. It recommends incorporating indigenous phonological data into AI training to improve the recognition of Nigerian English varieties and reduce bias in speed-to-text applications

Visual, Verbal, and Digital Semiotics: Exploring Multimodal Communication Practices among Social Media Users

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This study examines the interplay of visual, verbal, and digital semiotic resources in shaping multimodal communication practices among social media users. In contemporary digital environments, platforms such as Instagram, TikTok, Facebook, and X (formerly Twitter) have transformed communication beyond written text to include images, videos, emojis, and hashtags. Grounded in multimodal discourse analysis and social semiotic theory, the research adopts a qualitative approach, analyzing selected posts to explore how semiotic modes such as visual imagery, language, and digital symbols interact to express emotions, stance, and cultural identity. The findings reveal that social media communication is inherently multimodal, with each resource contributing uniquely while reinforcing others to produce coherent messages. The study further shows that these practices are shaped by platform affordances and sociocultural contexts, influencing identity construction and audience engagement. It concludes that effective social media communication relies on the strategic integration of multiple semiotic resources.

Key words: *Digital interaction, identity construction, multimodal communication, semiotics, Social Media Discourse*

The Interface of the Ibibio Phonology and Syntax

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This paper examined the interface of the Ibibio phonology and syntax. It is carried out to investigate the relevance of phonology in the study of syntax. The method of data collection was through unstructured elicitation interviews with competent native speakers and the researcher's intuitive knowledge of the language; data gathered were analysed using a descriptive method and the Government theory of GB-Syntax. It is observed that phonology plays a vital role in the phenomenon of syntax. The prosodic units (syllables and tones) intertwine and influence words and sentences in its speech production. The disyllabic structure, polysyllabic structure and negation provide lexical items with syllabic features which create distinguishable sentential meanings and mark grammatical functions. This paper concludes that phonology does not only occur as an independent level of linguistics, rather, phonology could be adopted in accounting for some phenomena in syntax of Ibibio language as well as other languages.

Keywords: *Phonology, Syntax, INFL-elements, Ibibio*

AI-mediated multimodal communication and its implications for language, identity, and culture

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This study examines AI-mediated multimodal communication and its implications for language, identity, and culture in contemporary digital environments. The paper explores how AI-driven tools—such as chatbots, speech recognition systems, and generative approach reshapes linguistic practices by fostering hybridity, code-switching, and the integration of semiotic resources. It further explores how these multimodal forms influence identity construction, enabling users to negotiate multiple, flexible identities across digital spaces. Participants include 30 active users of AI-mediated communication platforms, purposively selected to represent diverse age groups, linguistic backgrounds, and cultural contexts. The study employs a qualitative approach, combining digital ethnography, corpus-based sampling of AI-driven communications, and semi-structured interviews. Multimodal data—including text, images, and AI-generated content are systematically collected and analysed. Findings indicate that while AI enhances communicative efficiency and creativity, it also challenges conventional understanding of authenticity, authorship, and cultural ownership, highlighting the need for inclusive, ethical, and culturally informed communication practices.

Keywords: Artificial Intelligence, Multimodal, Culture, identity, Communication, Language

Algorithmic Misrepresentation in Spoken Language Systems: Evidence from Igbo Tone Errors in AI Storytelling

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This study investigates phonological inaccuracies in AI-driven spoken language systems, focusing on tonal misrepresentation in Igbo narratives generated through text-to-speech technologies. As a tone language, Igbo relies heavily on pitch distinctions for meaning, yet many AI systems inadequately encode these features, resulting in semantic distortion and communicative breakdown. Using selected AI storytelling outputs, this paper identifies recurrent tone errors, segmental substitutions, and prosodic inconsistencies, and analyzes their implications within an autosegmental phonological framework. The findings reveal systematic limitations in current speech synthesis models when applied to under-resourced African languages. The study argues that such misrepresentations not only hinder intelligibility but also risk eroding linguistic authenticity in digital storytelling. It concludes by proposing pathways for improving AI speech systems to better accommodate tonal and prosodic structures in Igbo and similar African languages.

Pron-Orthographic Conflict in English Language: AI to the Rescue

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This paper sets out to examine if silent letters in English words are deliberate negation or not; and to also identify causes of discrepancies in the orthography and pronunciation of English words. Further, the paper aims to check the possible role of Artificial Intelligent (AI) in resolving the pron-orthographic conflict. Relying on William Labov's variation theory, the paper discovers that there are notable pronunciation and orthographic differences between American and British English and therefore establishes that the American variety of the English Language is in total conflict with the British Variety. At the end of the findings, the study concluded that lack of consistency in pronunciation of English words and phonetic transcription, deliberate negations of sounds symbol in pronunciation of English orthography as well as superfluous of sounds symbols in English words remain contributing factors to the pron-orthographic conflict.

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Keywords: American English, British English, Conflict, Orthography, Pronunciation Pron-orthographic

Artificial Intelligence as a tool for Mother Tongue Preservation

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This paper explores the transformative potential of Artificial Intelligence (Al) as a proactive tool for the documentation, revitalization, and intergenerational transmission of endangered and minority languages. Moving beyond traditional archival methods, we examine key Al applications, including natural language processing (NLP) for automated speech recognition and transcription, neural machine translation for bilingual education tools, and generative models for creating interactive digital content such as chatbots and language learning apps. Case studies of ongoing projects such as Al-driven talking dictionaries and community-based automatic speech recognition demonstrate how machine learning can scale up the work of linguists and native speakers. However, the paper also addresses critical challenges, including data sparsity for low-resource languages, algorithmic bias, and the risk of disembodying language from its cultural context. We conclude that while Al is not a panacea, when co-designed with speech communities and grounded in ethical, participatory frameworks, it offers unprecedented scalability and accessibility for mother tongue preservation in the digital age.

Vocabulary Acquisition and Artificial Intelligence (AI) Assisted Pronunciation Practice for Prolonged Memory Retention

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Correct pronunciation plays a critical role in improving communicative intelligibility. However, it remains unclear whether focusing on pronunciation during vocabulary learning enhances long-term word retention. This study primarily aims to investigate whether vocabulary acquisition supported by artificial intelligence (AI)-assisted pronunciation practice leads to prolonged memory retention. A full experimental design with a pre-test and post-test control group was employed. Participants were 56 secondary school students aged 14–15, who learned unfamiliar English words using two different pronunciation teaching methods. Prior to the intervention, a pre-test was administered to both groups. The experimental group received AI-based speech recognition pronunciation instruction, while the control group followed a phonetic alphabet pronunciation method. The findings revealed that AI-enabled pronunciation practice significantly improved long-term word retention. Future research may benefit from applying this AI-supported pronunciation model using various accessible tools, recording and responding to learners' pronunciation practice across different languages.

Phonological bias in artificial intelligence: Nigerian English accent Variation

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This paper examines phonological bias in artificial intelligence through the lens of Nigerian English accent variation. While AI speech systems are often presented as neutral, they are largely trained on Inner Circle Englishes, leading to systematic misrecognition of localized phonological patterns. Drawing on insights from variationist phonology and World Englishes, the study investigates how features such as vowel reduction, syllable timing, and consonant substitution in Nigerian English are processed by selected speech recognition systems. Using a qualitative methodology, speech samples from educated Nigerian speakers are analyzed alongside AI transcription outputs. Findings reveal consistent bias, including vowel distortion, stress misplacement, and lexical misinterpretation. The paper argues that such bias reflects broader issues of linguistic inequality embedded in technological design. It concludes by advocating for more inclusive phonological modelling that accommodates diverse English accents.

Keywords*: phonological bias, artificial intelligence, Nigerian English, World Englishes, speech recognition, accent variation*

AI-Driven Modeling of Speech Rhythm in Nigerian English: A Study of South-South Nigeria

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This study examines the rhythmic patterns of Nigerian English as spoken in the South-South region through the application of Artificial Intelligence. Speech rhythm, a core aspect of prosody, plays a significant role in distinguishing varieties of English, yet it remains underexplored in Nigerian phonetic research. The study employs AI-driven acoustic analysis to investigate temporal features such as syllable duration, stress timing, and rhythm metrics. Drawing on insights from Phonology and acoustic phonetics, the research models rhythmic structures using computational techniques to determine whether South-South Nigerian English exhibits stress-timed or syllable-timed characteristics. The findings show that hybrid rhythmic patterns based on indigenous languages. This work contributes to the study of World Englishes and highlights the relevance of AI in contemporary phonetic analysis.

Assimilation as Computation: A Rule-based Phonological Perspective on Artificial Intelligence

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This paper investigates assimilation as a computational process within rule-based phonology and its relevance for artificial intelligence (AI). It aims to bridge generative phonological theory and modern computational models by showing that assimilatory processes function as symbolic operations. Adopting a qualitative, theoretical, and feature-based approach, the study draws on illustrative phonological data, including nasal assimilation and related processes such as elision, to develop a typology of regressive, progressive, and coalescent assimilation, mapping these onto processes such as look-ahead and feature integration. It also considers how AI can contribute to the analysis of phonological variation, the prediction of assimilatory environments, and the identification of distributional constraints, such as the positional restrictions of /ŋ/ and the behavior of semivowels. The analysis is grounded in rule-based phonology and incorporates Optimality Theory as a comparative framework, highlighting differences between serial rule application and constraint-based evaluation. Findings suggest that assimilation reflects a structured form of computation and that integrating phonological principles into AI can improve speech modeling, particularly for underrepresented varieties.

Keywords: Rule-Based Phonology; Assimilation; Optimality Theory; Artificial Intelligence; Computational Linguistics; Feature-Based Analysis.

Intonation Patterns in Questions and Statements in English: An AI Approach

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This study explores the application of artificial intelligence (AI) techniques in analyzing and distinguishing intonation patterns in English speech, focusing on questions versus statements. Drawing on recent literature, it highlights the significance of prosodic features such as pitch contours, duration, and spectral cues, and discusses the limitations of manual analysis. The methodology involves collecting diverse speech datasets, extracting acoustic features, and employing machine learning models, including deep neural networks, for classification tasks. Results demonstrate that AI models achieve high accuracy in capturing subtle intonational differences, with deep learning approaches outperforming traditional classifiers. Visualization of AI-captured patterns confirms the models' effectiveness in representing intonation contours. The discussion emphasizes AI's advantages over manual methods, including scalability and objectivity, and explores potential applications in speech recognition and language instruction. Challenges such as variability across speakers and dialects are acknowledged, guiding future research toward multilingual and real-time speech processing solutions.

Artificial Intelligence as a tool for Mother Tongue Preservation

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This paper explores the transformative potential of Artificial Intelligence (Al) as a proactive tool for the documentation, revitalization, and intergenerational transmission of endangered and minority languages. Moving beyond traditional archival methods, we examine key Al applications, including natural language processing (NLP) for automated speech recognition and transcription, neural machine translation for bilingual education tools, and generative models for creating interactive digital content such as chatbots and language learning apps. Case studies of ongoing projects such as Al-driven talking dictionaries and community-based automatic speech recognition demonstrate how machine learning can scale up the work of linguists and native speakers. However, the paper also addresses critical challenges, including data sparsity for low-resource languages, algorithmic bias, and the risk of disembodying language from its cultural context. We conclude that while Al is not a panacea, when co-designed with speech communities and grounded in ethical, participatory frameworks, it offers unprecedented scalability and accessibility for mother tongue preservation in the digital age.

Artificial Intelligence and Spoken Language Pedagogy in Selected Secondary Schools in Southwestern Nigeria

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This study examines the influence of Artificial Intelligence on spoken language pedagogy in secondary schools in South-Western Nigeria, focusing on teachers' awareness, perception, and use of AI tools in teaching spoken English. Motivated by challenges faced by teachers of English in non-native environments, this research draws data from Apostolic Faith Secondary Schools in South Western Nigeria and adopts a descriptive survey design anchored on the Technology Acceptance Model (TAM). Findings reveal that while teacher awareness of AI is growing, there is room for improvement in the actual classroom. The study recommends investment in digital infrastructure, teacher training, and curriculum reform to fully harness AI's potential in transforming spoken language education.

Keywords: Artificial Intelligence, Spoken Language Pedagogy, Technology Acceptance Model, Speech Recognition, English Language Teaching.

Phonological (Mis)Representation, Identity, and Persuasion in AI-Mediated Communication Available in Nigeria

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This study examines the phonological limitations of AI-generated speech in Nigerian digital communication, with particular attention to the mispronunciation of indigenous names and place names in marketing and media content. Drawing on data from AI voiceovers used in social media advertisements and controlled text-to-speech outputs, the study identifies recurrent segmental errors, stress misplacement, and inappropriate pausing patterns. These deviations are analysed against expected Nigerian English phonological norms. In addition, a small-scale perception test evaluates how such inaccuracies affect listener judgments of naturalness, credibility, and trust. Findings suggest that AI-mediated speech often reflects non-local phonological models, resulting in reduced communicative effectiveness and subtle forms of linguistic marginalisation. The paper argues that phonological authenticity is central to persuasive communication in Nigerian contexts and calls for more inclusive, locally grounded speech datasets in AI development. The study contributes to emerging discussions on AI, identity, and spoken language in Africa.

Keywords: Artificial Intelligence (AI), Nigerian English Phonology, Speech Synthesis, Text-to-Speech (TTS), Phonological Representation, Accent, Identity, Persuasion, Digital Communication

Do AI speech systems preserve lexical tone? Evaluating Igbo Text-to-Speech accuracy

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This study provides controlled evaluation of tonal preservation in AI-generated Igbo speech. A corpus of 80 (near)minimal pairs was constructed and synthesised using Google Cloud and Coqui TTS under diacritic-marked and unmarked input conditions. Acoustic analysis of f0 contours was combined with a controlled perception experiment involving 5 Igbo L1 speakers to assess intelligibility and tonal accuracy. Results reveal systematic tonal neutralisation in unmarked inputs and inconsistent tone realisations even when diacritics were present more in Google Cloud TTS, resulting in marked reductions in lexical identification accuracy. These patterns indicate that current TTS systems do not yet consistently encode tone-dependent meaning distinctions in Igbo. The findings expose a structural limitation in current AI speech technologies for tonal languages and raise critical concerns regarding their deployment in educational and language preservation contexts. The study underscores the need for more tone-sensitive modelling approaches in the development of speech technologies for low-resource languages.

Segmental Variation in Nigerian English Sermons and Its Implications for AI-Based Speech Recognition

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The global expansion artificial intelligence (AI)-based recognition raises concerns about the underrepresentation of non-native English varieties. This study examines segmental variation in Nigerian English sermons and its implications for speech-processing technologies. Using data from six preachers across Hausa, Yoruba, and Igbo backgrounds, it analyses consonant and vowel realisations such as /θ/, /ð/, and /ə/. Findings reveal systematic patterns, including dental fricative substitution, absence of schwa reduction, and vowel strengthening influenced by indigenous languages. These features are stable and may reduce AI recognition accuracy. The study recommends more inclusive and linguistically diverse speech datasets.

Keywords: Nigerian English, segmental variation, speech recognition, artificial intelligence