IBUKUNOLUWA SOYEBO

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EDUCATION

University of Southern California, USA

PhD Student, Computer Engineering. Advised by Professor Corey E. Baker **AUG 2024 -**

Research Interests: Wireless Networks, Small Language Models, Mobile Development

Relevant Courses: Probability for Electrical and Computer Engineers, Introduction to Computer Networks, Wireless Networks, Distributed Systems for Medical Applications, Analysis of Algorithms, Optimization Methods for Design

Covenant University, Nigeria

Bachelor of Engineering in Electrical and Electronics Engineering. **First Class Honors (4.52/5.0)** **SEPT 2021**

Research Interests: Human-Computer Interaction, Remote Energy Monitoring, Mobile Development, IoT.

Relevant Courses: Software Development Techniques, Data Communication and Computer Networks, Computer Organization and Architecture, Applied Programming I and II, Introduction to Machine Learning

Final Year Thesis: Design and Implementation of Notification-Based Energy Monitoring System For Prepaid Meters With Mobile iOS App supervised by Professor Aderemi Atayero and Dr Tolulope Adesina

PUBLICATIONS

Peer-Reviewed Conference Proceedings

- **Ibukunoluwa Soyebo,** Alyssa Donawa, Rodrigo Aguilar Barrios, Brice Patchou, Corey E. Baker "On-Device Language Models for Privacy-Preserving Stress Prediction: A Multimodal Evaluation on Mobile Health", 1st Workshop on Human-centered AI Research for Mental Health (HARMONY 2026) (Accepted)

RESEARCH AND PROJECTS

Lazerpay Android SDK

- Started an open-source Android SDK for Lazerpay (a cryptocurrency payment platform) developed with Kotlin to collect payments, withdraw and invest revenue through an Android app.
- Wrote instrumentation tests to ensure strict adherence to the commissioned UI and added KotlinLint to ensure adherence to conventional guidelines in code structure.

Final Year Thesis, **Home Energy Monitor**

- Authored a 13,000-word thesis on the "Design and Implementation of Notification-Based Energy Monitoring System for Prepaid Meters with Mobile iOS App." Assembled a Smart Meter System monitoring power, voltage and current, utilizing Arduino Uno and iOS Charts library to display instantaneous and cumulative energy readings on a mobile app. Applied SwiftUI to implement a Settings view and NotificationCenter to send daily local notifications of energy consumption.

Kredit

- An iOS application developed with Swift and MVC pattern that serves as a marketplace for affordable loans by offering different loan options with competitive rates.
- Computed accurate credit scoring and real-time credit risk analysis using an ML model trained with supervised learning algorithms eventually hosted on a mobile app using TensorFlow Lite.

Covenant University Center for Research, Innovation and Discovery, CUCRID

- Collaborated on an IoT solution for farmers to remotely monitor the physical properties of their farms using a collection of sensors on an Arduino Uno with real-time connection to a web API displayed on an iOS application. It included an automatic sprinkler to disperse water when soil humidity falls.

Research Assistant (College of Medicine, University of Lagos)

- Designed and administered surveys focused on assessing the Knowledge, Attitude, and Utilization of Family Planning Services among Women of Reproductive Age in Surulere Local Government Area, Lagos. Additionally, I played a key role in crafting the literature review, synthesizing pertinent publications, and ensuring the absence of grammatical errors.

PROFESSIONAL EXPERIENCE

Chaka - (Contract Software Engineer) December 2023 - August 2024

- Maintain the iOS codebase to utilize the latest developments in recent Apple software releases and Human design guidelines while ensuring backwards compatibility up to iOS 13

Leadway Assurance - (Full-time Software Engineer) December 2022 –

- Designed and implemented a suite of RESTful web APIs for a salvage disposal online auctioning platform, utilizing Entity Framework for data access and SQL Server for database management.
- Coordinated and implemented multi-language support through string localization for iOS and Android platforms, optimizing efficiency by consolidating string resources into a unified file.
- Developed and integrated a step-counting module within the Leadway Health mobile app for both iOS and Android platforms. This module incentivizes health insurance enrollees with monetary rewards and additional benefits based on their daily step count. I worked with Apple's HealthKit and Android's Health Connect to retrieve and track user device-recorded step data.
- Created a comprehensive suite of backend APIs utilizing ASP.NET Core and Entity Framework, establishing the foundational framework for a Marine and Goods-in-transit Insurance service.
- Oversaw the successful migration of data employing Azure Data Studio and SQL scripts. Additionally, established an email notification service to apprise stakeholders of pertinent database-related events.
- Collaborated in setting up a Continuous Integration/Continuous Deployment (CI/CD) pipeline using Azure DevOps, fostering seamless collaboration within an Agile Development Model on Azure.
- Executed the integration of a backend web service aggregating multiple cost-effective geocoding software solutions to enhance cost-efficiency and ensure system redundancy. Developed a script to dynamically select geocoding services randomly while maintaining a log of successful service calls in a text file.

AuditBar - (iOS Contractor) April 2022 - PRESENT

- Utilized SwiftUI, Combine and UIKit to develop and publish an invoicing and e-commerce app useful for listing inventory on an online store and receiving orders from customers, gathering downloads across 5 continents.
- Designed comprehensive UI Tests to ensure UI elements and interactions matched user interface designs with a 96% accuracy.

Capital Express - (Android Contractor) April 2022 - January 2023

- Developed an insurance agent mobile application with Kotlin, Java and MVVM design pattern to enable agents to sell life insurance, send payment reminders, and view commission statements, among other service offerings.
- Utilized Repository pattern and dependency injection to adhere to SOLID principles and maintain a clean codebase.

Leadway Assurance - (Graduate Software Engineer) October 2021 – November 2022

- Integrated Telemedicine within the Leadway Health app with Swift and Kotlin to allow remote medical consultation using AVFoundation and Vidyo SDK, leading to a 109% increase in downloads.
- Curated and distributed user questionnaires to qualify user experience and define customer pain points to identify areas of improvement with a success rate of 38%
- Reduced crashes from 53% to 8% by refactoring the existing codebase to make use of MVVM pattern, Codable Protocol and reusable views

Leadway Assurance - (Software Engineering Intern) March – December 2020

- Adapted Contacts and ContactUI library within the Leadway Referral App to help insurance Agents register prospective clients.
- Implemented an iOS Document Signing App to enable users to sign and distribute PDFs within the Leadway network, saving the company $2500 per month in expenses
- Implemented iOS and Android Remote Portal applications with a team of 3, to accommodate the changing work environments due to the Coronavirus pandemic, where staff could apply to work from any Leadway location.

Leadway Assurance - (IT Intern) June - September 2019

- Completed iPadOS and iOS applications (Leadway PMA) to facilitate building access for 200+ employees and guests, enabling employees to manage appointments and granting access to desired guests.
- Developed and deployed Web APIs connected to an MSSQL database with ASP.NET Web API in MVC design pattern. APIs were used for authentication, turnstile control and communication with QR Code Scanners included in the Access Control System.

LEADERSHIP

Head, Software. (Convocation Planning Committee Covenant University) April – October 2021
Led a 15-man cross-functional team of developers and designers in successfully creating and deploying a comprehensive student yearbook for the graduating class.

HONORS AND AWARDS

Honourable Mention, August 2026
1st Workshop on Human-centered AI Research for Mental Health, 2026

Runner Up, Best Demo Presentation November 2025
IEEE Body Sensor Networks, 2025

Travel Award November 2025
IEEE Body Sensor Networks, 2025

NNPC/TOTAL National Merit Scholarship (RECIPIENT) August 2018 – September 2021
Scholarship awarded by NNPC/Total Energies based on academic merit.

Google Africa Developer Scholarship (RECIPIENT) April 2020 – January 2021
Scholarship awarded by Google, granting free access to Android Developer courses, projects, and embedded labs

RELEVANT SKILLS

Languages: Python, Kotlin, C, C#, Latex, Swift, Java, SQL, BASH, MATLAB
Frameworks: Firebase, SwiftUI, UIKit, Combine, XCTest, XCUITest, MVC, MVVM and MVP Architecture, Git, GitHub
Operating Systems and Platforms: MacOS, Windows, Arduino/ESP, Raspberry Pi, Docker
Interests: Accessibility, TDD, Machine Learning, African Fiction, Technical Writing, Cinema, Football.
Other Technical Skills and Software:Proteus, MSSQL, ASP.NET, Mobile development (Android, iOS), Computer Vision, Deep learning, AutoCAD, Figma, Postman, Firebase, Software Optimization

CERTIFICATIONS

- Certificate of Course Completion - Google Africa Developer Scholarship Program
- Certified Fiber Optics Technician

VOLUNTEER EXPERIENCE

Programming Tutor
- Developed and conducted a comprehensive Scratch programming course for children aged 4-12, introducing fundamental coding concepts in a playful and engaging manner.

Volunteer, Google Developer Groups Lagos SEC 101: Getting Started with Cybersecurity
- Managed presentation technology, including controlling slides and troubleshooting technical issues to ensure seamless presentations.

Volunteer, Niah Foundation
- Identified and actively engaged in charitable initiatives such as book, clothing, and blood donations in remote areas in Lagos Nigeria.

CONFERENCES

SysConf by SysDsgn
- An advanced systems engineering conference for backend engineers by industry experts in Nigeria and abroad

Mobile Core Summit
- A mobile computing conference for Mobile engineers by industry experts in Nigeria and abroad.

DevFest by Google
- A software computing conference for software engineers by industry experts in Nigeria and abroad..