# Ilerioluwakiiye Abolade

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#### RESEARCH INTERESTS

My research interests lie in the intersection of artificial intelligence and healthcare, with a focus on explainable AI to improve trust in diagnostic tools as well as clinical applications like predictive analysis and medical imaging in low-resource settings.

#### **EDUCATION**

# Federal University of Agriculture, Abeokuta

2021 - Present

BEng. Mechatronics Engineering

Department of Mechatronics Engineering

Positions held: Financial Secretary in the 2023/2024 academic session.

### **TECHNICAL SKILLS**

- Machine Learning: Python, TensorFlow, Pytorch, Scikit-learn, Pandas, NumPy, Flask, Technical Writing, Jupyter Notebook, Matplotlib, Seaborn.
- Software Development: HTML, CSS, JavaScript, React, TypeScript, BootStrap, Redux, RTK Toolkit, MUI, Chakra, Formik, and Yup.
- Version Control: **Git and GitHub**.

#### **EXPERIENCES**

# Federal University of Agriculture, Abeokuta

Sept 2024 - Present

Research Assistant under the supervision of Engr. Mrs. F.O Durodola

Abeokuta, Nigeria

Conducting research on a sunlight tracking system for solar energy optimization, integrating principles of intelligent systems to enhance energy efficiency in renewable technologies. Co-authored a research paper detailing findings and methodologies from this research, currently under review for publication.

ML Collective - Remote Oct 2024 - Present

Independent Researcher under the Medical Imaging focus group

Abeokuta, Nigeria

Leading research in medical imaging with a focus on exploring deep learning techniques for medical imaging. Collaborating with fellow researchers to investigate approaches to improve trust and accessibility in diagnostic tools through explainable AI and predictive analysis.

# **Cakasa Engineering Services Limited**

Aug 2024 - Oct 2024

Student Industrial Work Experience Scheme (SIWES)

Lagos, Nigeria

Designed real-world industrial projects using AutoCAD and AVEVA. Mentored in foundational concepts of machine learning, fostering an interdisciplinary understanding of technology applications in industrial settings.

Credo Aug 2023 - Mar 2024

Built and maintained user-friendly interfaces for web applications, enhancing functionality and user experience through efficient coding practices. Developed problem-solving and technical skills that support research involving human-computer interaction and technology accessibility.

### **PROJECTS**

### **Maternify**

Contributed to the development of a website featuring an ML-powered chatbot that delivers personalized prenatal care and maternal health information. Utilizing NLP and supervised learning, the chatbot adapts to user queries for accurate responses. Recognized as a top AI project by Microsoft Student Ambassadors for Q1 2024, the platform improves access to critical healthcare information and reduces misinformation.

### **Petfinder Adoption Prediction Model**

Developed a machine learning model for predicting pet adoption speed in the PetFinder Adoption Prediction project, utilizing data preprocessing, feature engineering, and model optimization to achieve high accuracy.

# **Titanic: Machine Learning from Disaster**

Developed a predictive model for the Titanic survival prediction challenge, utilizing feature engineering, model selection, and optimization techniques to enhance accuracy. Demonstrated proficiency in handling imbalanced datasets and refining model performance.

# **Cassava Leaf Disease Classification**

Designed and implemented a machine learning model for the Cassava Leaf Disease Classification challenge, focusing on image preprocessing, model architecture selection, and fine-tuning to accurately classify different disease types. Leveraged transfer learning and data augmentation techniques to improve model performance.

### SELECTED ACADEMIC ACTIVITIES, TALKS AND CONFERENCES

**Deep Learning Indaba, 2024:** Presented a poster of our project, Maternify, at the largest Machine Learning conference in Africa, Deep Learning Indaba 2024.

**DjangoCon US 2024:** Presented a talk at DjangoCon US 2024 on *The Magic of Dependencies Installing Themselves*, highlighting the benefits of PEP 723, which focuses on simplifying Python script dependency management to improve efficiency.

**Association of Mechatronics Engineering Students (AMTES), FUNAAB**: Delivered an engaging talk on *Balancing Academics and a Thriving Tech Career*, offering practical strategies for prioritization and time management.

### SELECTED AWARDS AND ACHIEVEMENTS

### Top 5 Project Recognition, Maternify (innovateHER)

Maternify was recognized for its effective implementation of machine learning, chatbot functionalities, and overall viability. The project's use of Microsoft Azure to deliver a practical, ML-driven solution earned it a top 5 placement in the project cycle.

### Travel Grant Recipient, PyCon US, 2024

Chosen for a financial aid grant to attend PyCon US 2024, the largest annual convention for the Python programming language.

# Travel Grant Recipient, DjangoCon US, 2024

Selected for an opportunity grant to participate in DjangoCon US 2024, a leading international conference focused on the Django web framework.

### Travel Grant Recipient, Deep Learning Indaba, 2024

Awarded a travel grant to attend the Deep Learning Indaba 2024, a six-day annual gathering in Dakar, Senegal, uniting the African machine learning and AI community through keynotes, tutorials, workshops, and networking opportunities.

### Travel Grant Recipient, PyCon Africa 2024

Awarded a travel grant to attend PyCon Africa 2024, a week-long annual gathering of Python developers, enthusiasts, and experts. The event brings together participants from over 30 African countries and beyond to share ideas, innovations, and best practices in Python development.

# UpSkill by Cardtonic 1.0, 2022

Recognized as the second-top web developer in a national competition by Cardtonic and awarded a MacBook for exceptional skill and innovation in web development.

#### COMMUNITY SERVICES AND VOLUNTEERING EXPERIENCES

# Core Team Member, Google Developer Groups, FUNAAB Chapter

Sept 2024 - Present

Co-lead of the Machine Learning track, mentoring students through hands-on workshops and fostering technical expertise. Hosted community meetups to strengthen collaboration, enhance learning opportunities, and build a supportive and inclusive developer community.

# Founder, Engineering Girls in Tech, FUNAAB

Nov 2024 - Present

Launched a community dedicated to inspiring and equipping all female engineering students with technical skills, networking opportunities, and career support.

#### Microsoft Learn Student Ambassador

August 2023 - Present

Volunteering as one of 5 Microsoft Learn Student Ambassadors at my university, I serve as a bridge between Microsoft and the student developer community, empowering learners with access to technical resources, mentorship, and hands-on opportunities. I organize events that enhance students' technical and career skills.

# Nigerian Universities Engineering Students' Association Tech Community

Jan 2024 - Sept 2024

I lead the programming classes in the NUESA Tech Community, where I teach and mentor students in tech. Through this role, I'm actively contributing to the growth and development of aspiring engineers, paving the way for a more collaborative and innovative learning environment.

# **Academic and Creative Writer, AMTES**

Nov 2024 - Present

Volunteering as a technical writer for AMTES, an association of 500+ students, creating content on mechatronics projects and sharing personal experiences to engage and inform members.

#### MEMBERSHIPS AND AFFILIATIONS

### **IEEE Engineering Society**

Oct 2024 - Present

Student Member

# **Association of Mechatronics Engineering Students (AMTES)**

Oct 2021 - Present

Member and Volunteer

The Association Of Professional Women Engineers of Nigeria (APWEN), FUNAAB Chapter Oct 2021 - Present

Student Member

#### TRAINING & CERTIFICATION

Introduction to Machine Learning- Kaggle	Feb. 2024
Intermediate Machine Learning – Kaggle	Feb. 2024
Introduction to Deep Learning- Kaggle	March 2024
Introduction to Programming- Kaggle	Jan. 2024
Computer Vision – Kaggle	July 2024
Deep Learning – DeepLearning.AI-Coursera	April 2024
CS229 Machine Learning - Stanford	March 2024
CS231n Computer Vision - Stanford	Aug. 2024
Meta Front-End Developer Professional Certificate - Coursera	March 2024