

Oluwadara (Dara) Adedeji

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Professional Summary

PhD candidate in the School of Computer Science at University College Dublin, researching financial behavioural digital phenotyping for mood episode detection through open banking data, machine learning, and human-centred research, supervised by Dr. Mark Matthews. Author of seven peer-reviewed publications and preprints spanning financial digital phenotyping, computational ethics, and applied machine learning, with over four years of university teaching experience. Background spans applied AI research, data science, and mental health community advocacy across Ireland, Rwanda, and Nigeria, underpinned by an MSc from Carnegie Mellon University and a First Class BSc in Electrical and Electronic Engineering.

Education

2023-09 - 2027-08

Doctor of Philosophy in Machine Learning

School of Computer Science, University College Dublin (UCD), Ireland

- Research: Passive Assessment of Mental Health Using Financial Data via Machine Learning.
- Supervisor: Dr. Mark Matthews | Research Ireland Centre for Research Training in Machine Learning (ML-Labs).

2021-08 - 2023-05

Master of Science in Engineering Artificial Intelligence

Carnegie Mellon University

- CGPA: 3.95 / 4.0
- Key Modules: Data Inference and Applied Machine Learning, Programming and Problem Solving for Data Analytics, Engineering AI Project Methods, AI System Design, Principles and Engineering Applications of AI, Deep Learning, Human-Robot Interaction.

2014-07 - 2019-05

Bachelor of Science in Electrical and Electronic Engineering

University of Ibadan, Nigeria

- CGPA: 6.2 / 7.0 | First Class Honours
- Key Modules: Elementary Computer Programming, Algebra, Analysis, Calculus and Trigonometry, Logic and Philosophy, Embedded-Based Systems, Servomechanics and Control, Signal Processing.
- Thesis: Remote Monitoring and Control of Smart Home Devices Using Arduino Microcontroller and Sensors.

Work Experience

2024-05 - 2024-07

Data Science Intern

HealthRhythms, Palo Alto, California | Remote

- Harnessed Databricks for mental health inferencing and actively contributed insights in weekly team meetings.
- Facilitated patient onboarding for a mental health solution, addressing data collection challenges such as incomplete and messy data.

2023-01 - 2023-08	AI Scientist / Research Associate <i>CyLab Africa / Upanzi Network, Carnegie Mellon University, Rwanda</i> - Developed machine learning (ML) models to classify cattle using muzzle images, collaborating in a Scrum (Agile) environment. - Designed and developed an advanced signature verification model leveraging Siamese CNNs for precise identity authentication. - Engineered feature extraction and ML models to detect smishing in SMS texts, enhancing security and fraud prevention.
2023-09 - present	Teaching Assistant / Demonstrator (Part-Time) <i>School of Computer Science, University College Dublin</i> - ML System Deployment COMP 41860 Spring 2026 Masters - AI for Time Series COMP 41850 Spring 2025 Masters - Software Engineering COMP 30830 Spring 2025 Bachelors - Introduction to Artificial Intelligence COMP 30030 Autumn 2024 Bachelors - Data Science in Python COMP 47670 Autumn 2024 Masters - Python Object Oriented Programming (OOP) COMP 20270 Autumn 2024 Masters - Data Structures and Algorithms COMP 20230 Spring 2024 Masters - Information Visualisation DS COMP 30750 Spring 2025 & 2026 Masters - Information Visualisation Blended Delivery COMP 47970 Spring 2025 & 2026 Masters
2022-08 - 2022-12	Graduate Teaching Assistant <i>Carnegie Mellon University Africa, Rwanda</i> - Supported teaching and delivery of the Programming and Problem Solving for Data Analytics course. - Delivered recitation sessions, assisted with assignments, and graded coursework fairly, consistently, and in a timely manner. - Held office hours to guide students in programming concepts and problem-solving.
2019-06 - 2019-08	Supply Chain Analyst (Intern) <i>Coca-Cola Hellenic Bottling Company, Lagos, Nigeria</i> - Completed the Coca-Cola Summership, a competitive global 3-month internship, gaining cross-functional experience in supply chain operations (Fleet, Transportation, and Warehouse). - Managed shipment orders and logistics documentation using SAP, supporting efficient warehouse and transportation operations. - Presented a data-driven solution to senior executives to improve warehouse efficiency and achieved sales of ~1,200 product cases across 10 field engagements.
2017-09 - 2018-02	Network Operations Analyst (Intern) <i>ipNX Nigeria Limited, Ibadan, Nigeria</i> - Analysed network coverage and field survey data to support radio placement and network optimisation. - Installed and configured Ubiquiti radios and routers, performed network diagnostics, and restored connectivity for 100+ clients. - Maintained network inventory, operational records, and HR activity reports to support efficient service delivery.

Grants, Scholarships, Awards and Honours

2025	1st Place — Huawei Ireland Tech Arena (LLM Inference Optimisation) <i>1st position out of 19 finalist teams and over 300 students in Ireland who participated.</i>
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2023	Finalist — UCC AI Quest <i>AI hackathon on image segmentation using deep learning.</i>
2023 - 2027	SFI Centre for Research Training in Machine Learning — Full PhD Scholarship <i>Science Foundation Ireland (SFI), ML-Labs, University College Dublin.</i>
2021 - 2023	Mastercard Foundation Scholarship at Carnegie Mellon University <i>Full postgraduate scholarship covering tuition, living expenses and leadership training at CMU Africa.</i>
2014 - 2019	5x Dean's Award for First Class Students in the Faculty of Technology <i>For maintaining a First Class grade across five academic sessions and graduating in the top 3% of 7,000+ students.</i>
2015 - 2018	MTN Foundation Scholarship for Science and Technology <i>Awarded to 500 outstanding science and technology students in Nigeria.</i>
2015, 2016	2x Etisalat National Merit Award <i>Awarded to 10 outstanding EEE/CS students with the highest CGPA in selected universities in Nigeria.</i>
2016	Winner, Etisalat Innovation Moment Challenge <i>Led 10 First Class students to win the best innovative idea amongst First Class Etisalat Merit Awardees in Nigeria.</i>
2016	Iyabode Victoria Ojelade Lawal (IVOL) Memorial Scholarship <i>Award recognising an outstanding proposal to commercialise a final-year project; selected as the top 10 in Nigeria.</i>
2015, 2016	2x Abel Ogundokun Odeleye Foundation (AOOF) Scholarship <i>Award for community service and academic excellence.</i>
2016 - 2018	NNPC/Total National Merit Award <i>National merit scholarship for outstanding students in Nigeria.</i>
2015 - 2017	Agbami Medical and Engineering Scholarship <i>National merit scholarship for outstanding medical and engineering students in Nigeria.</i>
2013	Overall Best Graduating Student, Sped International Secondary School Oyo <i>High School valedictorian of a graduating class of 120+ students.</i>

Publications

Peer-reviewed Articles & Preprints

1. **Adedeji, O.**, Balaskas, A., Coyle, D., Gaynor, K., and Matthews, M. (2026). Money and Mental Health: A Scoping Review of Financial Variables, Data Sources, and Analytical Methods. *Frontiers in Public Health*, 14:1812845. doi: 10.3389/fpubh.2026.1812845
2. **Adedeji, O.**, Olusegun, J., Gaynor, K., & Matthews, M. (2026). Manifestations of Mood in Money: Unravelling Financial Behaviours for Passive Assessment in Bipolar Disorder. In *EAI PervasiveHealth 2026* (In Press).
3. **Adedeji, O.**, Farayola, M. M., Brozena, J., Tal, I., Connolly, R., & Matthews, M. (2026). A Computational Ethical Framework for Financial Digital Phenotyping for Mental Health. *Proceedings of CIBB 2026* (In Press).
4. **Adedeji, O.**, Olusegun, J., and Matthews, M. (2025). "Money and Mental Health: Spending as a Mental Health Indicator — Psychological, Behavioral, Economic Perspectives and Data Collection." *Future Money Workshop, ACM CHI 2025*.

5. Kimani, G. N., **Adedeji, O.**, Fashingabo, P., Busogi, M., Luhanga, E., Sowon, K., & Chacha, L. (2023). Cattle Identification using Muzzle Images and Deep Learning techniques. *arXiv*. <https://arxiv.org/abs/2311.08148>
6. **Adedeji, O.**, Owoade, P., Ajayi, O., & Arowolo, O. (2022). Image Augmentation for Satellite Images. *arXiv preprint arXiv:2207.14580*. <https://arxiv.org/abs/2207.14580>
7. Imoize, A. L., **Adedeji, O.**, Tandiya, N., & Shetty, S. (2021). 6G Enabled Smart Infrastructure for Sustainable Society: Opportunities, Challenges, and Research Roadmap. *Sensors*, 21(5), 1709. <https://doi.org/10.3390/s21051709>

Presentations

- 2026-06 **"Human-Centered AI: Can Putting People First Make AI Safer?"**
Presented at Encode Africa's AI Safety Action Week.
- 2026-05 **"Funded. Prepared. Global"**
Panelist at a scholarship clinic guiding prospective scholars on landing global opportunities.
- 2024-09 **"AI in Healthcare: Opportunities and Requirements"**
A talk on applications, challenges, and ethical requirements of deploying AI in clinical and health settings, delivered to the NSK.AI community.

Workshops and Conferences Attended

- 2024, 2025 **Eyes-Off Data Summit on AI Privacy**
Oblivious
- 2024 **Public Patient Involvement (PPI) Summer School**
University of Limerick, Ireland
- 2024 **IBM Research AI Workshop**
IBM and Trinity College Dublin
- 2024 **AWS Gen AI Game Day**
Amazon Dublin (Top 10 of 25 teams)
- 2023 **International Conference for Learning Representations (ICLR 2023)**
Kigali, Rwanda
- 2023 **International Summer School for Advances in Biometric Authentication**
Alghero, Italy (remote)

Certifications

- 2026 - present **AI (LLM) Engineering Certification**
DataTalksClub (Ongoing)
- 2026 **Claude Code in Action**
Anthropic
- 2024 **AWS Certified Machine Learning — Specialty**
- 2021 **Microsoft Certified: Azure Fundamentals**

2024	MLOps Certification <i>DataTalksClub</i>
2024	Machine Learning Engineering Certification <i>DataTalksClub</i>
2024	Data Engineering Certification <i>DataTalksClub</i>

Leadership Experience and Community Development Service

2026 - present	Support & Self-Care Group Facilitator <i>Aware, Ireland</i> - Facilitating peer support groups for individuals experiencing depression, bipolar disorder, and related mood disorders. - Fostering a safe, supportive, and inclusive environment where participants share experiences, develop self-care strategies, and provide mutual support in line with Aware Ireland's guidelines.
2022 - 2023	Team Lead, Data Science Club <i>CMU-Africa, Kigali, Rwanda</i> - Led a team in the Umoja-Hack, Africa's inter-university machine learning competition. - Emerged highest-ranking team in Rwanda (intermediate category); featured on the CMU website and social media. - Participated in the 2022 UN Big Data Hackathon, focusing on energy prices and food inflation.
2018 - 2021	Head of Programs <i>Mentally Aware Nigeria Initiative</i> - Led programmes and mental health outreach initiatives as Head of Programs, reaching over 300 community members. - Organised and facilitated mental health walks, conversation cafes, and capacity-building workshops, including a World Mental Health Day workshop for medical students. - Supported member engagement through mentoring, advocacy, and mental health awareness initiatives, strengthening leadership, communication, and stakeholder engagement skills.
2016 - 2017	Public Relations Officer <i>Society of Electrical and Electronic Engineering Students (SEEES), University of Ibadan</i> - Prompt and accurate dissemination of information to a department of about 250 students. - Revitalised the SEEES PRESS organisation and facilitated a blog @seesui.wordpress.com.

Professional Memberships

- Graduate Member, Nigerian Society of Engineers (NSE)

Skills

Programming	§ Python, C/C++, Java, SQL, Shell Scripting, Claude Code
AI & ML	§ Gen AI, RAG, Agentic AI, OpenClaw, NumPy, Pandas, Scikit-learn, PyTorch, OpenCV, Databricks, Tableau
Cloud & DB	§ AWS, GCP, Azure, PostgreSQL, DynamoDB
Data Eng/MLOps	§ Apache Spark, Fast API, Flask, Django, dbt, MLflow, WandB, Docker, Terraform, Git/GitHub, CI/CD
Project Mgmt	§ Trello, GitLab, Agile/Scrum, Hills, Epics and User Stories
Language(s)	§ English (Excellent — Official Language); Yoruba (Mother tongue)

Leadership § Proven servant leadership across academic, research and community settings.

Others § Problem solving, research writing, technical presentation, participatory research methods.

References

References are available on request.