PERSONAL INFORMATION

Adedayo Samuel, AKINADE

📞 +2348163751034, +250790394814

✉️ akinadeadedayo1@gmail.com, aakinade@andrew.cmu.edu

EDUCATION AND TRAINING

August 2022 - May 2024

Masters of Science, Electrical and Computer Engineering
Carnegie Mellon University (CMU), Pittsburgh, Pennsylvania
- Cognitive Robotics, Reinforcement Learning, Deep Learning, Data Structures and Algorithms, Computer Vision

December 2014 - January 2021

Bachelor of Engineering, Mechatronics Engineering (First Class Honors - 4.78/5.00)
Federal University of Agriculture, Abeokuta (FUNAAB), P.M.B. 2240, Ogun State, Nigeria
- Digital Electronics, Automation, Robotics. Digital Signal Modelling, Control Engineering, Software Engineering, Embedded Systems, CAD/CAM, Entrepreneurship

PROFESSIONAL EXPERIENCE

September 2023 - Present

Research Associate
AI and Robotics Laboratory, Carnegie Mellon University, Africa, Rwanda
Biological Motion for Gesture Execution in Culturally Sensitive Robots for Africa
- Development of an attention sub-system for the Pepper robot
- Development of a social navigation system for the Pepper robot
- Development of culturally sensitive gesture execution in Robots
- Development of Biological Motion for gesture execution robots

July 2023 – September 2023

Research Assistant
BioRobotics Laboratory, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland
An Open Torque-Controlled Modular Robot Architecture for Legged Locomotion Research
- Development of Firmware for Motor Control for Quadruped Robots
- Reinforcement learning for energy-efficient robot locomotion in quadruped robots

December 2020 – August 2022

Mechatronics/Automation Engineer
- **Automation and Engineering Academy, Ikeja, Lagos State, Nigeria**
- Design, Implementation, and Maintenance of a Solar-powered Intelligent Traffic Light System across 22 junctions in Lagos State, Nigeria
- Design, Implementation, and Maintenance of IoT/SCADA systems for all junctions to enable remote access and control of all 22 traffic junctions
- Design, Assembly, and Installation of electronic components including intelligent timers and vehicle loop detectors

September 2020 – December 2020

Mechatronics/Automation Engineer
Automation and Engineering Academy, Ibadan, Oyo State, Nigeria
- Design of electronic Printed Circuit Boards (PCBs), including relay modules, LED boards
- Programming and Configuration of ATMega and PIC Microcontrollers for Embedded Systems applications
- Programming, configuration, troubleshooting, and maintenance of Siemens, Allen Bradly, and Haiwell Programmable Logic Controllers (PLCs) for industrial automation

January 2020 – September 2020

Research Assistant
LinkServe Consultants, Abeokuta, Ogun State, Nigeria
- Design and Development of a cassava flour (Lafun) production plant
- Research and Documentation of a fully automated cassava flour (Lafun) production plant
- Design, development, and implementation of a fully automated model greenhouse with climatic conditions monitoring

September 2018 – February 2019

Embedded Systems Engineer (Intern)
HIC MikroLAB, Asero, Abeokuta, Ogun State, Nigeria
- Design, development, and implementation of electronic circuits and embedded systems

▪ Installation of solar power systems for residential buildings

PERSONAL SKILLS

Communication Skills

▪ Excellent communication skills developed through experience in teaching students across different academic levels ranging from basic classes to tertiary levels

Organisational / Managerial Skills

▪ Leadership skills obtained while acting as the group leader of a group project of six members (Model Development of a Remote-Controlled Gate System, 2018)
▪ Good organizational skills obtained as the chairman of the planning committee of seven members of the first Mechatronics engineering conference in FUNAAB (The Future Conference, 2019)
▪ Project management skills obtained from a training programme organized by Seal-Sea Concept, 2019

Job-related Skills

▪ Computer Vision
▪ Deep Reinforcement Learning
▪ Excellent use of Robot Operating Systems (ROS)
▪ Development and Deployment of Machine Learning Models
▪ Good command of 3D CAD/CAM software
▪ Proficiency in Printed Circuit Board (PCB) Design
▪ Excellent Technical Research and Documentation skills

ADDITIONAL INFORMATION

Publications

▪ **A. AKINADE**, D. Barros, and D. Vernon, "Biological Motion Aids Gestural Communication by Humanoid Social Robots", International Journal of Humanoid Robotics, accepted for publication, January 04, 2025.
▪ **A. AKINADE** and D. Vernon, "Biological Motion for Gestural Communication by Social Robots", Robotics in Africa Forum at IROS 2024
▪ **ADEDAYO AKINADE**, Yohannes Haile, Natasha Mutangana, Conrad Tucker, and David Vernon, 2023. Culturally competent social robots target inclusion in Africa. Science Robotics 8. DOI:10.1126/scirobotics.adm7012
▪ **AKINADE, A. S**., Owoeye, S. O., Adenuga, K. I. & Mustapha, H. A., 2022. Enhancing the Human-Computer Interaction through the Application of Artificial Intelligence, Machine Learning, and Data Mining. In: T. Nirmalya & B. D. Parameshachari, eds. *Human-Computer Interaction and Beyond: Advances Towards Smart and Interconnected Environments.* Sharjah: Betham Books, pp. 159-176
▪ S.O. Owoeye, F.O Durodola, **S.A Akinade**, T. Farinde, O. Sulaimon, (2022), Development of a Solar-Powered Smart Iot-Based Egg Incubator for Small-Scale Poultry Farmers, Ife Journal of Information and Communication Technology, 6(1), pp 46- 53.
▪ Samuel, Owoeye; **ADEDAYO, AKINADE**; Folasade, Durodola; Samad, Bello (2021). Design And Implementation of A Hand Gesture Controlled Trolley, Proceedings of NIMACON 2021, Awka, Anambra State, Nigeria
▪ Samuel, Owoeye; **ADEDAYO, AKINADE**; Folasade, Durodola; Olaitan, Olaonipekun; Benedict, Anyanwu; Jethro, Odeyemi (2021). Development of A Fire Extinguishing Robot with SMS Alert Feature. Proceedings of the College of Engineering 3rd International Conference, FUNAAB, Ogun State, Nigeria
▪ Oyelami, Adekunle; **AKINADE, ADEDAYO**; Obianefo, Kingsley. (2020). Development of a real-time framework for farm monitoring using drone technology. IAES International Journal of Robotics and Automation (IJRA).9. 244. 10.11591/ijra.v9i4.pp244-250

Projects

▪ CSSR4Africa – Culturally Sensitive Social Robotics for Africa, 2023-2025
▪ Extending the CRAM cognitive architecture on the PR2 robot, CMU, 2023
▪ Incremental reinforcement learning for humanoid robots, CMU, 2023
▪ Development and deployment of Navigation Software for Pepper Humanoid Robot, CMU, 2023
▪ Design and Development of a Control System for Intelligent Traffic System, 2022
▪ Automatic Water Refill System for the College of Engineering, FUNAAB, 2021
▪ Autonomous Fire Extinguishing Robot, 2020
▪ Solar-powered drone for Real-Time Farm Monitoring with SMS Alert Capabilities, 2020
▪ Gesture Controlled Trolley, 2020
▪ Model Design of an Automatic Controlled Gate System, 2018
▪ Automatic Climatic Condition Monitoring for Greenhouse, 2018

Conferences and Seminars

- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Abu Dhabi, 2024
- Annual College of Engineering Conference, FUNAAB, Ogun State, Nigeria, 2021
- 18th Annual International Conference of the Materials Science and Technology Society of Nigeria (MSN), 2019
- Digital Literacy Skills using ICT Tools for Information Sourcing, 'Nimbe Adedipe Library, FUNAAB, Ogun State, Nigeria, 2019

Honours and Awards

- Congratulatory letter from the university registrar on attaining a remarkable position at the Committee of Deans of Engineering and Technology (CODET) Nigeria Competition, Abuja, 2019.
- Meritorious Award as the best Student representative (Head of Class), College of Engineering, FUNAAB, 2019
- The best-graduating student from the Department of Mechatronics Engineering, College of Engineering, FUNAAB, for the 2018/2019 session
- Overall best-graduating student, College of Engineering, FUNAAB, for the 2018/2019 Session
- Best Intern, Automation and Engineering Academy, 2021