Yomi Ikuru

abayomi.ikuru@gmail.com | linkedin.com/in/yomi-ikuru | yomitosh.dev

Education

Loughborough University — Loughborough, UK
Master of Science, Artificial Intelligence — *Oct. 2021 – Oct. 2022*

- Machine Learning, Robotics, Natural Language Processing, AI Ethics

University of Sheffield — Sheffield, UK
Bachelor of Engineering, Electronic Engineering with a Year in Industry. Class 2:1 — *Sep. 2017 – Jun. 2021*

- Engineering Software Design, System Design Analysis, Semiconductor Electronics

Professional Experience

Junior Software Engineer - Full Stack — Nov 2022 – Present
Aurora Energy Research — *Oxford, UK*

- Designing and maintaining features across multiple SERN stack micro-services for Power Market modelling and analytics
- Utilised AWS Step Functions and Lamdas to improve the frontend delivery service, allowing for consistent versioning and deployment in the development team

Data Engineer — May 2022 – Sep 2022
Kasaie Ltd - Startup — *London, UK*

- Implemented an organised structure for updating customer data on a database using GraphQL
- Automated the transfer of customer data from independent platforms using Python and REST APIs

Electrical Design Engineer — June 2019 – June 2020
VolkerRail Ltd - Placement Year — *Doncaster, UK*

- Designed and developed electrical design schematics and simulations in a team for use on the railway
- Managed the entirety of a design job; understanding the scope, rectifying issues and improved design workflow

Web Development Intern — Aug. 2016
CBC EMEA — *Lagos, Nigeria*

- Expanded my knowledge on creating websites using HTML, CSS and JavaScript in an agile environment

Work Experience

SpaceDART Avionics Engineer — July 2021 – Sep 2022
Project SunrIde, University of Sheffield — *Sheffield, UK*

- Developed and implemented the Ground Station Telemetry system with Grafana and InfluxDB
- Developed data ingestion tools for the telemetry system using Python, REST API and WebSockets
- Deployed the system to the cloud to be used by SunrIde team members using Docker and Nginx
- Contributed to the embedded avionics systems software on SunrIde rockets using C++ via Git
- Designed and developing a new project website using Next.js and Three.js

Electric Powertrain Systems Engineer — May 2017 – June 2021
Sheffield Formula Racing (IMechE Formula Student), University of Sheffield — *Sheffield, UK*

- Designed and developed the foundation of an electric formula student car in a team as part of a developmental push to using green energy
- Conceptualised communication and data logging systems using microcontrollers and CAN
- Improved technical knowledge on embedded systems software in electro-mechanical designs
- Developed communication and teamwork skills in the inter-disciplinary team of 60 members

Voluntary Experience

Cybersecurity Society Technical Lead Feb. 2022 – Aug 2022
Student's Union, Loughborough University *Loughborough, UK*
- Delivered engaging presentations on cybersecurity topics and curated fun challenges for society members
- Planned and organised society events in a team that prioritised member participation

Photography Society Publicity Officer May 2019 – June 2021
Student's Union, University of Sheffield *Sheffield, UK*
- Improved member engagement through an effective use of social media platforms
- Developed illustration and animation design skills for publicity material to promote society events

Projects

AI Robot Arm - MSc. Project | *Python, Nvidia Omniverse Isaac Gym* Apr. 2022 – Aug. 2022
- Researched and developed a vision-based Deep Reinforcement Learning algorithm to intelligently control a 6 DoF robot arm using Sim2Real transfer
- Documented my findings in a structured report along with a video presentation and demo

Smart Room | *C/C++, Linux Containers (LXC)* Feb. 2022 – Mar. 2022
- Designed and developed IoT devices using micro-controllers, CAD software and 3D printed parts
- Deployed an instance of Home Assistant using LXC to orchestrate and facilitate the use of the IoT devices with voice assistants

AI Robot Car - Postgraduate Project | *Python, Jupyter Notebook, TensorFlow, ROS* Nov. 2021
- Developed software in a team of 5 for a robot car to follow a Human using an Intel RealSense RGB-D camera
- Utilised Mobilenet V2, a pre-trained convolutional neural network model to detect people and avoid obstacles
- Implemented human-like behaviours for the robot to perform based on pre-determined conditions

Cryptocurrency Trading Bot | *Python, Node.js, SQLite, REST API, Git* May 2021 – Aug. 2021
- Developed a CLI application to speed up the process of trading cryptocurrency pairs using the APIs of two prominent cryptocurrency exchanges.
- Implemented a database for logging trades using SQLite
- Managed and responded to issues on the GitHub issue tracker for the project which has 50+ stars
- Re-architected the project from a simple python script to an object-oriented Node.js application, allowing for asynchronicity, extensibility and separation of concerns

Invisible Image Watermarking - Undergraduate Project | *Python, OpenCV, Next.js* Sep. 2020 – May 2021
- Developed an algorithm using Python, NumPy and OpenCV to embed an invisible watermark in the frequency domain of image that is robust to the process of dithering in physical prints
- Deployed a full-stack web application with Flask serving as a REST API, Next.js for the frontend and Redis as a task queue to allow for user testing of the watermarking algorithm online

HomeLab - Server and Networking | *Linux, KVM, Kubernetes, Docker, Nginx, CI/CD* Mar. 2020 – Present
- Built and setup homelab infrastructure for virtualisation, experimentation and deploying personal services online
- Implemented VLANs and a Site-to-Site VPN using WireGuard to connect a Virtual Private Server (VPS) network to my home network
- Deployed multiple web applications hosted locally using Nginx as a reverse proxy
- Managed self-hosted applications using a virtualised 3-node Kubernetes cluster and Docker running in LXCs
- Implemented PCIe GPU pass-through from a KVM Hypervisor Host to a Guest VM using IOMMU

Video2Live - iOS App | *Swift, SwiftUI, Google Admob* Nov. 2019 – Sep. 2020
- Developed an iOS app to convert video files to Apple's Live Photo format using Swift, for Live Wallpapers
- Published the app to the Apple AppStore gaining 38K+ downloads, an average 4-star review and double-digit revenue from in-app purchases and ads

Technical Skills

Languages: Rust, Python, C/C++, Swift, JavaScript, HTML/CSS, SQL
Frameworks: React, Node.js, Flask, Flutter
Developer Tools: Git, Docker, Kubernetes, Linux, AWS, Ansible, Terraform, VS Code, Xcode, VIM
Libraries: NumPy, pandas, Matplotlib, TensorFlow, PyTorch
Other: Photoshop, Blender