

YOMI IKURU

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EDUCATION

Loughborough University

Master of Science, Artificial Intelligence

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

Loughborough, UK

Oct. 2021 – Oct. 2022

University of Sheffield

Bachelor of Engineering (Hons), Electronic Engineering with a Year in Industry

- Engineering Software Design, System Design Analysis, Semiconductor Electronics

Sheffield, UK

Sep. 2017 – Jun. 2021

PROFESSIONAL EXPERIENCE

Junior Software Engineer - Full Stack

Aurora Energy Research

Nov 2022 – Present

Oxford, UK

- Building an in-house Retrieval Augmented Generation (RAG) tool with vision utilizing Python, Langchain, and OpenAI GPT LLMs. Boosting productivity by enabling quick information retrieval and drafting of client responses with a uniform tone for internal users
- Developed a core data processing pipeline, ingesting and transforming data from Parquet to CSV, utilizing Python and Rust for optimal efficiency
- Improved the React front-end deployment pipeline for simultaneous deployments, leveraging AWS Step Functions and Lambdas for increased team efficiency
- Delivered presentations to effectively communicate the workings of complex internal systems and to share practical knowledge within the team

Data Engineer

Kasaie Ltd - Startup

May 2022 – Sep 2022

London, UK

- Improved database design and built data ingestion tools into Shopify using Python and GraphQL

Electrical Design Engineer

VolkerRail Ltd - Placement Year

June 2019 – June 2020

Doncaster, UK

- Designed and developed electrical design schematics and simulations for railway applications in a team
- Oversaw a complete design project, from scope definition to stakeholder engagement, resolving issues and enhancing design workflows

WORK EXPERIENCE

SpaceDART Avionics Engineer

Project SunrIde, University of Sheffield

July 2021 – Sep 2022

Sheffield, UK

- Engineered a Ground Station Telemetry system for tracking rockets in flight using Grafana and InfluxDB
- Developed SunrIde rockets' avionics software in C++ using Git in a collaborative team, and built the project website showing 3D rocket models using Next.js and Three.js
- Created data ingestion tools with Python, REST API, and WebSockets
- Cloud-deployed the telemetry system for team access, using Docker and Nginx

Electric Powertrain Systems Engineer

Sheffield Formula Racing (IMechE Formula Student), University of Sheffield

May 2017 – June 2021

Sheffield, UK

- Pioneered the development of an electric Formula Student car, advocating green energy
- Designed communication and data logging systems with micro-controllers and a CAN bus
- Improved expertise in embedded systems within electromechanical design
- Cultivated communication and teamwork in a 60-member interdisciplinary team

VOLUNTARY EXPERIENCE

Cybersecurity Society Technical Lead

Student's Union, Loughborough University

Feb. 2022 – Aug 2022

Loughborough, UK

- Delivered engaging presentations on cybersecurity topics and curated fun challenges for society members
- Planned and organised society events to boost team member participation

Photography Society Publicity Officer

Student's Union, University of Sheffield

May 2019 – June 2021

Sheffield, UK

- Built up social media content to improve member engagement
- Developed illustration and animation design skills for publicity material to promote society events

PROJECTS

Astrysk | *React-Native*

Sep. 2023 – Present

- Building a cross-platform mobile application that run applets for various notable open-source applications

RL Robot Arm - MSc. Project | *Python, PyTorch, Nvidia Omniverse Isaac Gym*

Apr. 2022 – Aug. 2022

- Researched and developed a vision-based deep reinforcement learning model to 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 built IoT devices using micro-controllers, CAD software and 3D printed parts
- Set up Home Assistant on a local server to manage IoT devices and integrate with voice assistants

AI Robot Car - Postgraduate Project | *Python, TensorFlow, ROS*

Nov. 2021

- Bootstrapped software to allow a robot car to follow a Human using the Mobilenet V2 pre-trained object detection CNN model and an Intel RealSense RGB-D camera
- Implemented human-mimicking behaviors for the robot triggered by specific conditions

Cryptocurrency Trading Bot | *Python, Node.js, SQLite, REST API, Git*

May 2021 – Aug. 2021

- Built a CLI application to speed up cryptocurrency pair trading via APIs of prominent cryptocurrency exchanges, logging trades to a local database
- Open-sourced the trading tool, providing technical support on GitHub for a project with 50+ stars
- Restructured the project from a Python script to an object-oriented Node.js app for improved asynchronicity, extensibility, and modularity

Invisible Image Watermarking - Undergraduate Project | *Python, OpenCV, Next.js*

Sep. 2020 – May 2021

- Developed an algorithm to embed invisible watermarks in the frequency domain of images, designed to be robust to the process of dithering when printed
- Deployed a full-stack web application to demo the algorithm online using the Flask, Next.js and a Redis backed task queue

HomeLab - Server and Networking | *Linux, KVM, Kubernetes, Docker, Nginx, CI/CD*

Mar. 2020 – Present

- Built homelab infrastructure for virtualisation, experimentation and deploying personalised services online
- Established a Site-to-Site VPN using WireGuard, for on-demand access to my home network
- Deployed multiple web applications hosted locally using Nginx and Traefik as reverse proxies
- Managing self-hosted applications running in virtualised Kubernetes and Docker containers

Video2Live - iOS App | *Swift, SwiftUI, Google Admob*

Nov. 2019 – Sep. 2020

- Developed an iOS app to convert videos into the Apple Live Photo format using Swift, for 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, TypeScript/JavaScript, SQL, Go

Frameworks: React, Next.js

Developer Tools: Git, Linux, Docker, Kubernetes, Nix, AWS, Terraform, Jupyter, Neovim

Libraries: NumPy, Polars, Matplotlib, PyTorch