Ryan Mutiga Gichuru

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EDUCATION

University of Northampton Northampton, UK
Bachelor of Arts in Artificial Intelligence and Data Science *Expected May 2026*
- **Relevant Coursework**: Introduction to Artificial Intelligence, Data Structures and Algorithms, Cloud Computing and Big Data, Mathematics for Computer Science, Machine Learning, Statistics

Generative AI Bootcamp, GetSeen Ventures Remote
6-week intensive program on Generative AI technologies *Jul. 2024 – Sep. 2024*
- Focused on LLMs, Retrieval-Augmented Generation (RAG), and building production-level AI applications
- Developed practical skills in AI solution development and collaborative project execution

AI and GPT Bootcamp, Encode Club Remote
8-week program on AI applications and development *Aug. 2024 – Oct. 2024*
- Gained proficiency in AI techniques for NLP, image recognition, and content generation
- Built and deployed AI-powered applications using cloud services and local hardware

EXPERIENCE

Founding AI Engineer Jun. 2024 – Present
BARBAH Games (Startup) *Remote*
- Developing AI solutions/integrations for esports and education applications
- Leading initiatives in AI development and deployment, currently working on a customer support chatbot for the MVP
- Collaborating with cross-functional teams, improving communication and project management skills

Research Assistant Nov. 2023 – Jul. 2024
University of Northampton *Northampton, UK*
- Conducted data analysis and visualization using Python libraries (Pandas, NumPy, Seaborn, Matplotlib)
- Delivered AI literacy workshops within the university, presenting at three conferences on AI in education
- Engaged in prompt engineering, prompt versioning and fine-tuning of a custom GPT model

Student Ambassador Jun. 2024 – Present
Intel Corporation *Remote*
- Promoting learning and collaboration within developer communities
- Enhancing skills in oneAPI and exploring cutting-edge Intel hardware and software
- Organizing and delivering hands-on training sessions on AI and HPC

Campus Ambassador May 2024 – Present
Facia AI *London, UK*
- Spearheading awareness campaigns for Facia's liveness detection and facial recognition solutions
- Creating engaging content to showcase Facia's impact against cybercrime
- Representing the company at various campus events and initiatives

PROJECTS

RAG-Based Chatbot for BARBAH Games Website | *Python, NLP, RAG* Jul. 2024 – Present
- Designed and developed a Retrieval-Augmented Generation (RAG)-based chatbot to enhance user engagement and provide real-time assistance on the BARBAH Games website.
- Implemented end-to-end AI solution, including data ingestion, preprocessing, model finetuning, and deployment pipelines, ensuring scalability and reliability.
- Conducted rigorous testing and optimization to achieve low latency and high response accuracy, enhancing overall user experience.
- Monitored chatbot performance post-deployment and implemented continuous improvement strategies based on user feedback and interaction analytics.

Student Mental Health Chatbot (Group Project) | *Python, RASA, NLP, LLM Fine-tuning* Mar. 2025 – Present
- Leading the group and the AI model development for a university mental health chatbot using a hybrid approach combining RASA framework with fine-tuned language models.
- Implementing a personality-based response system with multiple conversation styles (empathetic, direct, motivational, analytical) to meet diverse student preferences.
- Creating comprehensive intent recognition for student-specific concerns including academic stress, social challenges, and financial worries.
- Processing and cleaning mental health datasets for both RASA intent training and model fine-tuning while ensuring data privacy and ethical compliance.

Warehouse Optimization with AI | *Python, Machine Learning, Data Analysis* May 2024 – Jul. 2024
- Collaborated with GXO on a project to improve operational efficiency in logistics order consolidation
- Applied k-means clustering and decision tree algorithms for data analysis and trend identification across both proprietary and open datasets
- Developed AI-driven optimization models and delivered a comprehensive report recommending tailored AI/ML systems for specific logistics use cases

Study Smart: AI Literacy Initiative | *Data Analysis, GPT, Python* Nov. 2023 – Jul. 2024
- Conducted data analysis to enhance AI literacy among staff and students.
- Fine-tuned custom GPT models for data analysis, contributing to one of the first university-led research efforts assessing the quality of both qualitative and quantitative AI analytics
- Collaborated with a team to present findings at educational conferences.

TECHNICAL SKILLS

Languages: Python, C++, JavaScript , HTML/CSS, SQL, WSL
Frameworks & Libraries: NumPy, Pandas, Scikit-Learn, TensorFlow, PyTorch
Tools & Technologies: Git, Github, CUDA, Linux(Ubuntu), BigQuery, Oracle, Docker, AWS
Areas of Expertise: Machine Learning, Data Analysis, LLM Finetuning and RAG Applications, AI Systems Design

ACHIEVEMENTS AND INVOLVEMENT

President, UON AI Society Sep. 2023 – Present

- Leading the society to foster innovation and collaboration in AI
- Expanded membership by 60% through strategic initiatives
- Organized workshops, hackathons, and speaker sessions

Former Treasurer, UON AI Society Sep. 2023 – Jun. 2024

- Increased society's budget by 52%, enabling key projects and events
- Managed financial planning and fundraising activities

Student Careers Coach, University of Northampton Sep. 2024 – Present

- Provide career support on CV writing and interview preparation
- Conduct career coaching sessions, helping students recognize their strengths and utilize them

Volunteer Store Assistant, Barnardo's Charity Mar. 2023 – Aug. 2023

- Managed store operations and merchandising for charitable causes
- Handled transactions and provided customer service

Certifications

- Kaggle Certificate in Pandas: Completed advanced data manipulation course
- **Disclosure and Barring Service (DBS) Check** Oct. 2024
  * Completed Gateway to Safeguarding certified by Thirtyone:eight

PRESENTATIONS

"Study Smart: Staff and Students Co-constructing AI Literacy at UON"
Presented at the Learning and Teaching Conference, University of Northampton, June 2024.

"AI for Independent Learning: URBAN Project"
Presented at the Learning and Teaching Conference, University of Northampton, June 2024.

"Study Smart Project Findings"
Presented at Merged Futures VI Conference, University of Northampton, June 2024.