

Shaanuka Gunaratne

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Skills

- Python | Java | C++ | Go | JavaScript | TypeScript | NodeJS | PyTorch | LangChain | SQL | MongoDB | Angular | React | AWS | Azure | Git
- Microservices | Frontend | Backend | Full-Stack | Machine Learning | Deep Learning | Computer Vision | Robotics

Experience

Software Engineer Ocado Technology *London, UK* **09/2024 – Present**

- Currently in a 6-month rotation working in a team of software and robotics engineers, to develop and test a new dexterous robotic arm to pick and pack grocery items more efficiently.
- Improving the robotic control and developing the client-side application for abstracting the complexities of the robotic control for external users.
- Will be working directly with AI researchers to train the arm using behaviour cloning and reinforcement learning techniques.

Software Engineering Internship (6-months) Amadeus *London, UK* **04/2023 - 10/2023**

- Special 6-month internship working directly on one of the company's main products, alongside senior engineers, business analysts, and product managers.
- Full-stack development on a large microservice-based architecture using Spring Boot Java and Angular.
- Revamped the current system architecture by integrating and interfacing between different backend systems for data interchange.
- Developed a brand new frontend UI based on design engineering specifications and created new REST APIs for the backend.
- Successfully delivered and presented 2 highly requested projects to customer airlines to assist with their business decisions.

Lead Full-Stack Developer Fundee *Remote, UK* **04/2023 - 09/2023**

- Part-time contract to develop a fully functional web-based property rental application as the lead engineer for a startup.
- Individually carried out the full system development cycle, which included real-time hosting of the booking system, account and property management, a search algorithm, integrating a payment system, and developing an interactive UI.
- Futureproofed the system architecture in anticipation for growth by integrating AWS services that allow for easy upscaling.
- Presented the final MVP to the CEO, who was happy to deploy for testing with a small customer base.

Education

Master of Engineering Imperial College London *London, UK* **10/2020 - 06/2024**

- **MEng Computer Engineering** (Computer Science with Electronic Engineering)
- **Favourite Modules:** Software Systems, Machine Learning, Discrete Mathematics, Computer Vision, Functional Programming, Embedded Systems, Advanced Computer Networks, Robotics, Advanced Linear Algebra.

Projects

Master's Project: User-Adaptive Educational Device Powered by Generative AI.

- Part-time contract to develop a fully functional web-based property rental application as the lead engineer for a startup.
- Individual research and development project to create a standalone educational device for young learners, using a Raspberry Pi 4 in a custom 3D-printed, book-shaped case.
- Developed a platform that integrated advanced AI models (GPT, DALL-E) to generate personalised content by scraping live data on current world events, producing interactive stories, riddles, and puzzles.
- Designed a custom unsupervised density-based clustering model to build an intelligent recommendation system, which worked with large language models (LLMs) to continually generate and adapt content tailored to the user.
- Presented the project to a board of professors, who expressed strong interest in its educational potential, leading to a first-class grade and contributing to my overall first-class year total.

ICHack 2024: Geopolitical Sentiment Analyser using LLMs.

- Participated in Europe's largest student-run hackathon, developing a geopolitical sentiment analyser to track international events' impact on equities and commodities.
- Led the backend development, integrating custom-chained LLMs and web scraping for data processing.
- Presented the technical side of the product to the judges due to having the most expertise in the technical component.
- Praised on technical knowledge and reasoning by judge and Quantitative Developer at Citadel LLC.