

Shaanuka Gunaratne

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Skills

- Python | Java | Go | C++ | 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

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|--|--------------------------------|-------------------|--------------------------|
| Software Engineer | <u>Ocado Technology</u> | <i>London, UK</i> | 09/2024 – Present |
| <ul style="list-style-type: none">• Worked in 2 different teams, one focusing on distributed systems with robotics, the other on retail simulation and optimisation.• Developed a new variable vacuum system for a fleet of robotic arms in production. This project required communication with various teams to integrate my service, developing with low-latency and concurrency in mind to ensure compatibility with the large microservices architecture used in production. This is estimated to increase warehouse vacuum efficiency by 23-36% depending on usage.• Currently working on optimising a large Java-based simulation application that models Ocado's online retail system, from modelling customer behaviour on the website, to the logistics of delivery time windows and routes for the drivers. | | | |
| Software Engineering Internship (6-months) | <u>Amadeus</u> | <i>London, UK</i> | 04/2023 - 10/2023 |
| <ul style="list-style-type: none">• 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 microservices 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. | | | |
| Founding Engineer (Full Stack) | <u>Fundee</u> | <i>Remote, UK</i> | 04/2023 - 09/2023 |
| <ul style="list-style-type: none">• Develop a fully functional web-based property rental application end to end as the first engineer in the company.• Independently handled 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.• Future-proofed the system architecture in anticipation for growth by integrating AWS services that allow for easy upscaling.• Presented the final MVP to the CEO, who approved deployment for testing with a small customer base. | | | |

Education

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|---|---------------------------------------|-------------------|--------------------------|
| Master of Engineering | <u>Imperial College London</u> | <i>London, UK</i> | 10/2020 - 06/2024 |
| <ul style="list-style-type: none">• MEng Computer Engineering (Computer Science with Electronic Engineering) - High 2:1.• 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.**
- 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 generative AI models (GPT, DALL-E) to create 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.
- Hackathon - ICHack 2024: Geopolitical Sentiment Analyser using LLMs.**
- Participated in Europe's largest student-run hackathon, developing a geopolitical sentiment analyser to track the impact of international events 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 for technical knowledge and reasoning by judge and Quantitative Developer at Citadel LLC.