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SHAANUKA GUNARATNE

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WORK EXPERIENCE

Software Engineer - Placement **Amadeus IT** – London **04/2023 – 10/2023**

- Special 6-month internship working directly with senior engineers, business analysts, and product managers.
- Full-stack development on a large microservice-based architecture using Spring Boot Java and Angular CLI.
- Revamped the current system architecture by integrating separate backend systems together for data interchange.
- Developed the UI on the frontend and integrated it with the new backend.
- Delivered 2 important projects that were highly requested by customer airlines to assist with business decisions.

Skills: Java Spring Boot, JavaScript, Angular, MongoDB, Microservices, REST APIs, Agile Scrum, Docker, Kubernetes, Git.

Lead Full-Stack Developer **Fundee** (Remote) **04/2023 – 09/2023**

- Part-time contract to develop a fully functional web-based property rental application as their lead engineer.
- Oversaw the full system development cycle, which included a real-time hosting and booking system, account and property management, a search algorithm, a payment system, and an interactive UI.
- Created an expandable system architecture and integrated web services that allow for easy upscaling in the future.

Skills: System Design, ReactJS, Next.js, HTML/Tailwind CSS, Stripe, MySQL, AWS, Management, Full-Stack Development.

EDUCATION

Computer Science & EE **Imperial College London** **10/2020 - 06/2024**

- MEng Computer Engineering (joint Computer Science and Electronic Engineering master's). Aiming for a first-class.
- Favourite Modules: Machine Learning, Blockchain and Cryptocurrencies, Discrete Mathematics, Computer Vision, Functional Programming, Embedded Systems, Advanced Computer Networks, Robotics, Advanced Linear Algebra.

A-level **Woodhouse College** **09/2018 - 06/2020**

- A* Mathematics, A* Computer Science, A Physics.

GCSE **Friern Barnet School** **11/2015 - 06/2018**

- GSE Average: 8.0. Level 9: Physics, Level 8: Maths, Computer Science, English, Chemistry, Biology, French.

RECENT PROJECTS

Group Project: Automated Pet Caretaker Robot with Web App.

In a team of 4, we built, programmed, and 3D printed a fully autonomous robot that could dispense food, stream live footage, and send automatic updates on pet behaviour when owners were not present. We created a web app where the user could add a feeding timetable, watch a live video feed, and get photo updates of the pets from a camera with a trained machine learning model to distinguish between animals.

Skills: Python, C++, HTML/CSS, AWS, Web Development, Multithreading, MQTT, PyTorch, Raspberry Pi, IOT Systems, Git.

Group Project: Simulation Software Development in F#.

Worked under our professor in a team of 4 to improve a large CPU simulation research tool. My work was focused on rending SVGs, and it ranked the highest in the cohort and was integrated into the final product.

Skills: F#, Functional Programming, UI development, SVGs, Rendering, Git.

Machine Learning: Building an Artificial Neural Network to Predict House Prices.

Built an ANN to predict the average house prices in different locations within California. After building the regression model, I created an automated hyperparameter tuning algorithm to improve the architecture.

Skills: PyTorch, NumPy, Artificial Neural Networks, Machine Learning Methods, GitLab.

Computer Vision: Brain Tumour Segmentation from X-Ray Images.

Built a convolutional neural network using the U-NET architecture to segment tumour regions from x-ray images. The model could very accurately distinguish between normal brain tissue and the regions infected with tumours.

Skills: Convolutional Neural Networks, PyTorch, U-Net Architecture.

LANGUAGES AND TECHNOLOGIES

Python, C++, Java, JavaScript, F#, HTML/CSS, SQL, Verilog, Bash.
Git, Docker, OpenShift, PyTorch, NumPy, NodeJS, React, Angular, Spring, MongoDB, MySQL, AWS, Arduino, MQTT.