

WORK EXPERIENCE

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**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.
- Revamped the current system architecture by integrating separate backend systems together for data interchange.
- Developed the UI on the frontend and created new REST APIs on the backend.
- Successfully delivered and presented 2 highly requested projects to customer airlines to assist with their business decisions.

**Skills:** REST APIs, Java Spring Boot, JavaScript, Angular, MongoDB, Microservices, 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.
- Successfully deployed a fully working version of this web application, ready for customers to use.

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

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**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

- GCSE Average: 8.0. Level 9: Physics, Level 8: Mathematics, Computer Science, English, Chemistry, Biology, French.
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## 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 are 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 Competition: Self-Sustaining Multi-Agent System.**

Currently working in a group of 6 to develop a set of fully autonomous agents that can survive in a simulated environment, with agents from other teams competing for food and rewards in the same environment. My aim is to fully synchronise each agent in our team using efficient communication methods, with a concrete decision-making algorithm to increase their chances of survival.

**Skills:** Golang, Advanced Object-Oriented Programming, Multi-Agent Systems, Game Theory, Communication.**Machine Learning: Building an Artificial Neural Network to Predict House Prices.**

Worked in a team of 2 to build an Artificial Neural Network to predict the average house price in different locations within California. After building the regression model, I built an automated hyperparameter tuning algorithm to improve the architecture. This increased the accuracy of the model by 10%.

**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

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Python, C++, Java, JavaScript, Go, F#, HTML/CSS, SQL, Verilog, Bash.

Node.js, React, Angular, PyTorch, Spring Boot, Kafka, MongoDB, MySQL, Git, Docker, Kubernetes, AWS, MQTT.