

SIDDHARTH SRIVASTAVA

siddharth.srivastava23@imperial.ac.uk ♠ siddharthsrivastava.co.uk

EDUCATION

Imperial College London

MSc Advanced Computing

September 2023 - September 2024
London, United Kingdom

University of Warwick

BSc (Honours) Computer Science - First Class

September 2020 - July 2023
Coventry, United Kingdom

- Modules: Functional Programming, Algorithms, Advanced Computer Architecture, Computational Physics, Electrical and Electronic Circuits, Machine Learning, Neural Computing;
- First Class Honours (20/21, 21/22, & 22/23, 73.8% overall)
- Dissertation titled: 'Tools for augmentation of training data' - 82% overall.

Overseas Family School

International Baccalaureate Diploma

August 2018 - May 2020
Singapore

- 43/45 IB Diploma points (Higher Level Mathematics, Physics, Economics)

EXPERIENCE

The Trade Desk

Software Engineering Intern - Connected TV Inventory

July 2023 - September 2023
London, United Kingdom

The Trade Desk is one of the world's largest demand side platforms powering programmatic advertising.

- Engineered a data processing pipeline to analyse data from **AWS S3** into **Vertica** on an hourly basis to calculating ad metrics for podded advertisements, using **Apache Airflow**, **Apache Spark**, **SQL** and **Databricks**;
- Designed a **Grafana** dashboard connected to **Vertica** to display the calculated metrics as an internal tool for the CTV engineers;

American Express

Technology Engineer Internship - Global Commercial Services

June 2022 - August 2022
London, United Kingdom

- Collaborated in a group of 6 interns and 3 full time engineers on a software project, following the **Scrum** methodology;
- Designed and engineered a micro-services based web application to facilitate data migration between the old FXIP platform to the new Global Pay platform; built using **Kotlin**, **Spring Boot**, **React**, **PostgreSQL** and **Apache Kafka**;
- Implemented containerization using **Docker** to isolate the services and databases into their own containers, facilitating a streamlined deployment to production.

Warwick Moto

Lead Mathematical Modelling & Software Engineer

June 2022 - July 2023
University of Warwick

Warwick Moto is a student-led engineering team to build fully-electric race-spec superbike.

- Lead a team of 4 software engineers to develop advanced **particle swarm optimisation** scripts using **MATLAB** and **Simulink** to minimise lap times and maximise efficiency of a virtual model bike, achieving the optimal gear ratio for the next-generation superbike;
- Engineered and developed a new frontend for the Warwick Moto website using **Typescript** and **React**, increasing marketability of the product and improving external relations;
- Facilitated the transition of the code and models to **GitHub Enterprise** and enforced code standards and SOPs.

Mathematical Modelling & Control Systems Engineer

November 2020 - June 2023

- Designed algorithms in **Python** to compute an elevation cycle for the Isle of Man circuit using geographical data and a drive cycle;
- Engineered a 3 degree of freedom vehicle model in **Simulink** using the vehicle dynamics blockset to simulate longitudinal and lateral movement of the bike;
- Developed an algorithm to convert waypoint data of any racetrack into a steering cycle to simulate the running of a bike on a track;
- Programmed a new Electronic Control Unit with two CAN channels based on the Embed E400 Automotive Controller using **Simulink** and **CANalyzer**;
- Implemented contactor sequencing to ensure safe startup, state transitions and shut down for the motor and inverter on the bike.

Primrose Hill Surgery

Administrator & IT Support

June 2021 - August 2021
London

- Utilized **Pandas** and **NumPy** to perform data analysis on vaccination data at the local vaccination site to enable equitable allocation of funds;
- Performed searches on **EMIS** to sort patients based on criterion to provide specialised care;
- Operated the NHS e-referral service to refer patients to hospitals for advanced care;
- Volunteered at the local vaccination site as a vaccinator to administer over **1000** COVID-19 jabs;
- Coordinated the IT response to manage the **Palantir Foundry** vaccine ordering platform and Outcomes for Health Point of Care system to ensure smooth operations.

PROJECTS

Miyagi

CS261 Software Engineering

React, Express, MongoDB

A full-stack mentoring system developed in a group of 7 students in collaboration with Deutsche Bank

- Developed the mentor-mentee matchmaking system using the **cosine similarity** metric based on expertise of mentors and needs of mentees;
- Engineered algorithms to scrape spoofed data from websites using **Beautiful Soup** to insert into our database to act as fake data.

SKILLS

Languages: Python, Java, HTML, CSS, JavaScript, PHP, SQL, MATLAB, Simulink, Kotlin

Frameworks/Tools: matplotlib, numpy, scipy, pandas, Flask, React, React Native, Beautiful Soup, Tensorflow, Keras, PyTorch