

Josh Jennings

ELECTRICAL ENGINEERING STUDENT

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Education

Imperial College London

MENG ELECTRICAL AND ELECTRONIC ENGINEERING

South Kensington, London

Oct 2016 - Jul 2020

- **Expected Result:** Upper Second Class Honours.

Boston Spa School

SECONDARY SCHOOL AND SIXTH FORM

Boston Spa, Leeds

Sept 2009 - Jun 2016

- **A Levels:** Mathematics (A*), Further Mathematics (A), Physics (A)
- **GCSE:** 10 Grade A* to C, including 4 A*

Professional Experience

ICL Digital Learning Hub

JAVASCRIPT PROGRAMMER

South Kensington, London

Jun 2019 - Aug 2019

- Developed interactive JavaScript visualisations for Imperial College's Machine Learning Masters Degree Course.
- Liaised with lecturers and other academics to make sure visualisations were of an excellent standard.

Department of Chemistry, Imperial College London

LEAD ENGINEER AND PROGRAMMER

South Kensington, London

Jan 2018 - Sep 2018

- Worked for the Department of Chemistry in an interdisciplinary group to develop a smartphone based biosensor for use with Lateral Flow Assays for detecting Vancomycin concentration in blood plasma.
- Negotiated with prospective sponsors for project funding, represented Imperial College at the international SensUs 2018 competition (3rd in innovation), pitched the biosensor to professionals, and promoted the biosensor to the public.

Projects

(FULL DETAILS AND PORTFOLIO AVAILABLE AT JOSHJENNINGS.CO.UK)

- **Event Driven SNNs:** Designing software for generating spiking neural networks for use on the Partially-Ordered Event-Triggered System. Developing more efficient algorithms and comparing POETS performance to ordinary computers.
- **Intermittent Claudication Health App:** Developed an application using JavaScript to improve quality of life for patients suffering from Intermittent Claudication. Won first prize for the best third year EEE group project.
- **VisUAL2 GNU Assembler exporter:** Added features to the VisUAL2 ARM emulator including giving it the ability to export UAL ARM as GNU ARM Assembler files. Implemented using F# for the back end and JavaScript for the front end.
- **F# Neural Network Library:** Created a small library for creating neural networks designed for and built with F#.
- **Smartphone Biosensor:** Built a smartphone application for Android that used colour intensity of lines on Lateral Flow Assays as well as machine learning to calculate Vancomycin concentration in blood plasma.

Technical Skills

Programming F#, C++, Python (including Keras), ARM Assembly, JavaScript

Miscellaneous Linux, Microsoft Office, LaTeX, Arduino Development, PCB Design

Other Interests

Space Society Designed software and hardware to communicate with CubeSats for the Space Society.

Miscellaneous Keen hiker; have organised trips across Europe.