James Arnold

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Profile

I'm a 3rd Year electrical and electronic engineering student looking for work to broaden my career experience. I am intensely curious and always willing to discover new things, and I am a hard worker, always eager to fulfill tasks to the best of my abilities. I enjoy working as part of a team and helping to contribute to the development of the field of engineering, and society as a whole.

Education

Higher Education

Imperial College London
MEng Electrical and Electronic Engineering, 3rd Year
Expected grade: 2:1

Secondary School:

Chetham's School of Music, Manchester (2006-2015)
4 A-levels: A* Maths, A* Further Maths, A Physics, A* Music
Eight A* GCSEs: Maths, Music, Double Science, Drama, German, English Language, English Literature

Key Skills

- Proficient at C++, having studied it for two years at University
- Proficient in Java, Python and MATLAB
- Experience of programming in ARM Assembly language
- Knowledge of Verilog HDL, with experience programming Altera FPGAs.
- Knowledge of JavaScript, HTML and CSS, as well as experience designing and programming interactive web pages and sites.
- Significant experience of Arduino, Micro Python and ARM Mbed programming and hardware projects, as well of Internet of Things projects using MQTT.
- Knowledge of Analogue electronics, control systems, communication systems and power systems.
- Hands-on experience of designing and constructing electronic devices.
- Significant knowledge of digital signal processing, linear algebra, probability and statistics.
- Knowledge of several key machine learning algorithms, such as neural networks and support vector machines, and experience implementing these in MATLAB and Python.
- Comprehensive ability to use Microsoft Office software and LaTeX

General Experience

- Group leader for my 1st year project at University, which was successfully seen through to completion, designing and building a line-following robot. This helped me to develop leadership, project management

- 3rd year university group project creating an image-processing system connected to a robotic apparatus to observe, measure and detect crack propagation through composite materials

- Successfully designed and constructed an Internet-of-Things light-following robot using a MicroPython microprocessor, controlled from a custom website.

- Served as year representative for the student council at secondary school for two years. This helped be to be able to write interestingly and informatively.

- I have pursued an interest in music since a young age, to a high standard, and this has helped me become a hard worker, and develop skills of time management, being able to cope with stress and work to deadlines, and be able to plan and undertake long-running projects.

Volunteering

- I participated for two years in the Imperial College "Pimlico Connection" tutoring where I gave extra maths and science support to local students from disadvantaged backgrounds. I have served as the lead tutor on this scheme, in charge of organizing a group of tutors at one of the schools. This has provided me with valuable and useful leadership experience.

- I have served as a member of the commercial team of Imperial College's "Enactus" society, raising funds for a variety of social enterprises on campus, where I have served as secretary, marketing lead and have taken part in several fundraising activities, which has helped to improve my organizational skills, my ability to work as part of a team, as well as project and event planning skills.

- I also volunteered for a weekend homework club with the "Student Action for Refugees" charity to help refugee children, often with not a great grasp of English, with their schoolwork.

- I worked with the Imperial College "Equinox" society to help develop a datalogger for monitoring solar panels in Africa.

Other Qualifications

- Standard ECDL (European computer driving license): with modules taken in word processing, spreadsheets, databases and presentation

- DipABRSM diploma in piano

- ABRSM grade 8 Violin and music theory

Hobbies and Interests

Playing and performing music, which I have pursued to a relatively high standard, solo and in groups. Computer programming (especially computer games) and building electronic devices. I have successfully built a MIDI drumkit using Arduino, and converted a toy keyboard to MIDI. I am currently working on a wearable GPS navigational armband.