Thomas Bayley

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EDUCATION

Imperial College London   **London, UK** | 2017 - 2021

MEng Electrical and Electronic Engineering

3rd Year Modules Include: Biomedical Electronics, Digital Signal Processing, Machine/Deep Learning, Embedded Systems

Exeter School   **Exeter, UK** | 2010 - 2017

A Level Further Maths (A*), Maths (A), Physics (A), Electronics (A*)

GCSE   6 A*'s; Biology, Chemistry, English Literature, History, Mathematics, Physics

4 A's; English Language, French, Geography, Latin

WORK EXPERIENCE

xAI Asset Management   **London, UK** | June - August 2019

- ❖ xAI Asset Management uses machine learning techniques combined with macro-economic analysis in order to make predictions about the financial markets
- ❖ Over six weeks, had the task of prototyping an iOS app that implemented one of xAI's machine learning models
- ❖ Used and built on prior knowledge of Python and Swift to develop the front and backend of the app.
- ❖ Learnt about programming languages such as PHP, Java and HTML

The Devon Marquee Company   **Devon, UK** | June 2018

- ❖ Worked for one month driving company vehicles to events and erecting marquees, having to learn quickly so that I could teach new employees how to set up big tents

Omada Capital   **London, UK** | June 2015

- ❖ Spent two weeks, in a small corporate finance house, developing a teaser presentation designed to interest potential investors in a company

POSITIONS OF LEADERSHIP

Treasurer of Imperial Cross-country and Athletics Society   2019 - 2020

Secretary for Imperial Fencing Society   2018 - 2019

Prefect at Exeter School   2016 - 2017

PROJECTS

App Development – Since the end of my internship, this summer, I have been working on developing a game with the intention of launching it on the App Store in the near future. This project has been rewarding in that I have been able to gain a lot more experience in Apple's programming language, Swift, and I've had to think very carefully about how to maximise the popularity of my product and structure it so as to reduce the risk of its being copied.

Vein Identifier – For my 2nd year University group project, I built a system to identify the precise location of a patient's veins and thus the optimal location in which to make an injection. This product can reduce the number of unsuccessful injections, thereby improving patient experience.

Ballistics Calculator – During my A Levels I worked on writing a program in C++ that could evaluate air rifle trajectory pattern data to establish key variables: muzzle velocity and ballistic coefficient. Once these variables had been set, the model $F \propto V^2$, was used to predict shot placement accounting for variables such as wind speed and angle of projection.

More of my projects can be found on my **GitHub** page: github.com/tajbayley

ACHIEVEMENTS / SPORTING & OTHER INTERESTS

UKMT – Senior Maths Challenge Gold award and Kangaroo 2016

CCF – Member Royal Navy Section 2015-2017

Electronics A Level Subject Prize – Exeter School 2017

Modern Pentathlon – Although having only started Modern Pentathlon when I took up fencing at Imperial, I was pleased to finish 4th in last year's BUCS Modern Pentathlon Championships.

Fund-raising – Raised monies for the charity, Battle Back, by operating an informal tuck shop during school break-times. I took part in the Bristol Half-Marathon in 2017 and was sponsored to raise funds for the charity, Autistica.

Cider Making – Each September, I attempt to make cider using the apples from our garden. As well as being surprisingly hard work, given we have a manual press, it is incredibly rewarding, since about six months later I get to drink it.

Cooking – I enjoy eating, the more so if I have prepared the meal myself and particularly if I can share it with friends, my most popular dish being pigeon burgers.