

Education

Edinburgh University – Informatics (MInf) (2019-Present)

> > 80% average marks in quality & readability of code and documentation.

Functional Programming in Haskell	Formal Logic	Linear Algebra
OOP & Software Development	Calculus	Robotics & Computer Vision
Creative Coding for Music	Computer Security	Operating Systems
Programming Language Design	Mandarin Chinese	Microprocessor Architecture
Data Science & Statistics	Cognitive Science	Algorithms & Data Structures
Discrete Maths & Probability	Metaheuristic algorithms	Internet-scale computing

Arbroath High School (2013-2019)

Proxime Accessit 2018

Employment

- Inkwell PR Full stack developer (December 2023 Present)
- > Helping deliver a MVP for an Al writing assistant startup
- Implementing payment and subscription services into a webapp
- PlayerData Firmware engineering intern (June 2023 September 2023)
- Developing performant driver code for low power sports wearables
- > Writing hardware emulators for testing and validation of driver code
- Edinburgh University Gymnastics Men's artistic coach (May 2023 Present)
- Costa Coffee Barista (September 2022 June 2023)

Experience & Projects

University projects

High performance metaheuristic algorithms using TensorFlow & NumPy

I used TensorFlow and vectorised NumPy operations to implement a high-performance particle swarm optimiser and puzzle solving genetic algorithm.

Edinburgh cycle share scheme – data analysis and presentation

 I analysed data from Edinburgh's cycle rental scheme using Python libraries and visualization tools, a resulting visualisation briefly became the most popular post on the dataisbeautiful subreddit. (redd.it/mrbvvt)

Tenuto; Robot piano tutor

- Developed hardware and control software for a robotic piano tutor concept, interfacing with Bluetooth LE MIDI and utilising wireless chips, microcontrollers, and high-power transistors to drive a solenoid array, with variable key velocity using PWM signalling.
- Key player in a large team, our product demo was rated the best among 23 teams by a panel of technology and business experts; I contributed practical expertise that prevented critical delays and provided ideas that guided the product design.

Hobby projects

SendEvent app – NLP assisted events and invitations

> Uses a natural language processing framework to turn plain English descriptions of events like "Ice cream party on wed afternoon 17 july" into shareable formats.

Wireless measurement device for understanding impact forces on gymnasts

- > Created a wearable harness with inertial measurement hardware, collected data over Bluetooth using Python API
- Analysis and visualisation to gain insights into physical preparation.

Training clock for Edinburgh university gymnastics club – (clock.tommo.page)

- > Built using react and deployed using firebase
- > Synchronised to a central calendar and displays upcoming social/competitive events

High school projects

Scottish Baccalaureate in STEM – wireless communication using visible light

- Highest Baccalaureate grade for the Angus district (2019)
- Learned embedded programming, electronics, signal processing and telecommunications and developed a relay chat proof of concept in an independent research project

Volunteering & Non-technical Involvement

K Gymnastics

Edinburgh University Gymnastics Club – Social and fundraising coordinator

- Planning and organising social activities and fundraising initiatives, collaborating with other sports clubs at the university
- Working as a team in a diverse group of committee, coaches, and club members

Edinburgh University Gymnastics Club – Lead performance training coach

- Organising and running a training programme
- > Coordinating with the university's sports performance experts to improve gymnast preparation