

Thariq Fahry

Mobile: 07425362885

Email: thariqfahry@gmail.com

Address: 103 King Henry Terrace, 162 The Highway, London E1W 3BG

GitHub: <https://github.com/thariqfahry/>

Stack Overflow: <https://stackoverflow.com/users/14449940/thariqfahry>

LinkedIn: <https://www.linkedin.com/in/thariqfahry/>

I'm a software engineer specialising in low-level, machine learning, and systems programming. I have been coding for more than 7 years, from teaching myself C and Python in high school, to making machine learning pipelines in a production environment during my placement year. My Mechatronics degree gives me a unique skillset combining hardware and software design, allowing me to excel at any role. Besides programming, I enjoy hiking, collecting records, and running marathons.

Education

MEng Mechatronics & Robotics, University of Leeds (2017 - 2022)

Classification: 2:1

Sample of Projects:

- **Developed bare-metal neural network inference library and touch-screen driver for the ARM Cortex-A9 SoC** in C. Optimised code for embedded systems resource constraints, and used ARM DS-5 to debug
- **Created image processing pipeline using Python and OpenCV** to process MRI data of spines for spinal treatment research project
- **Used ARM Keil to develop calculator app in C for the ARM Cortex-M**, writing drivers to manually initialize embedded hardware peripherals
- **Developed FPGA game using Verilog** for the Cyclone V SoC and verified design using simulation and hardware testing, using Python to simulate display hardware

Sample of Modules Taken:

Name	Grade
Embedded Systems Design	74%
FPGA Design for SoC	80%

Name	Grade
Programmable Logic	83%
Individual Project (Dissertation)	78%

A-Levels: Colombo International School (2016)

A*AAB including Mathematics, Further Mathematics & Physics

GCSEs: A-Levels: Colombo International School (2014)

A*A*A*AAAA including Mathematics, ICT, English, and Physics

Work Experience

Network Rail, Network Analyst (Jul 2020 - Jul 2021)

- **Built and deployed machine-learning models** using TensorFlow and Scikit-learn, to advise on high-level business decisions; automated model updates using GitHub Actions CI
- **Built Python data automation tools using PyQt** and maintained source code using Git; created documentation and delivered training
- **Created data visualisation dashboards** with Python for company executives, including company CEO and Director General of Department for Transport
- **Achieved Outstanding** (highest classification) in year-end performance review

Skills, Technologies & Programming Languages

C	Python	Linux	Git
Google Cloud	JavaScript	Rust (basic)	Verilog HDL

Personal Projects

- **A Tree of Inaction:** Python + Flask web scraper app using Google Cloud Functions backend and d3.js frontend
 - **pyfunge:** an optimised Befunge-93 interpreter in Python
 - **autoflex:** web app that sends notifications whenever new jobs are added to Indeed, made with Flask on Google Cloud, using REST API design practices
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Leadership & Extracurriculars

Vice President, Leeds EEE Society [ShockSoc] (Apr 2019 - Aug 2020)

- Elected after successful campaign; organised Robot Fighting League (RFL) and Spring Ball events; pitched RFL to sponsors, negotiated contract, and secured £2000+ funding in 2019/20; acted as treasury signatory and managed society budget

Electrics Team Member, Leeds Formula Student Team (Sep 2019 - July 2020)

- Designed and tested the engine shutdown circuit for 2020 vehicle using EDA software; delivered presentations biweekly to team of 70+ people using communication skills; used time-management skills to meet design deadline

Social Secretary, Leeds EEE Society [ShockSoc] (March 2018 - Aug 2019)

- Organised and promoted monthly events for 30+ attendees, including go-karting, paintball, club nights, and annual Otley Run and Halloween; used communication skills to negotiate ticket prices with venues and advertise on campus and Facebook

Social Secretary, LUU Comedy Society (Apr 2019 - Aug 2020)

- Organised monthly socials including Would I Lie to You, comedy nights, and afternoon tea; used time-management skills to balance committee position workload with both other committee positions and university work
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Hobbies & Interests

- Climbed Mount Snowdon in October 2021 and organised trip for 9 people
 - Currently training for the 2023 London Marathon, having achieved a half marathon time of 1:33:50
 - Trampoline gymnast, having competed in 2019 Irish Trampoline Open and 2018-19 Northern English University Trampolining leagues
 - Answering programming questions on Stack Overflow by ([top 2% this month](#))
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References

Dr. Joshua Freeman: *Dissertation supervisor, School of EEE, University of Leeds: Email available on request*

Employer reference: *available on request*