ADAM **MCARTHUR**

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A Curious and Solution-Oriented Engineer with a Global and Open-Facing mindset. Passionate about Technology in DevOps, Robotics and Tech in Healthcare, with a goal to make the world a better place. On track to achieve a First-Class Master's Degree from The University of Strathclyde in Electrical and Mechanical Engineering with Distinction by May 2025.

Skills

Programming (Python, Golang, PHP, C/C++)	DevOps (Docker, Git, CircleCI, Armada)
CAD Software (SolidWorks, Inventor)	Admin Tools (Monday.com, GitHub, Slack)
Modelling Tools (MATLAB, PSpice)	Office 365 (Word, Excel, PowerPoint)

Work Experience

G-Research – Open Source Team
June 2022 – Present

Engineering Intern – London/Remote
- Working with one of the top quantitative research firms globally to create Armada, a tool that can manage workflows across up to a million cores.
- Continued to expand the new Python Armada Client, adding Python AST code generation, gRPC function calls, example code files and testing strategies.
- This work will greatly improve the learning curve of the Python Client, potentially net saving hundreds of hours for clients of the Armada Client globally.

Major League Hacking (MLH) Fellowship
June 2022 – Present

Engineering Fellow – USA/Remote
- Fellowship offered to some of the strongest Software Engineers with thousands of applicants, focussing on real-world applications within Open Source.
- Learned about the importance of Stakeholders, Blocker Recording and Documentation before, after and during the development of a Project.
- Attended lectures on a range of subjects, including Testing, Artificial Intelligence, and others from Senior Engineers in industry.

Strathclyde Hyperloop Society (Strathloop)
Nov 2020 – Present

Propulsion Systems Lead – Glasgow
- Systems Lead tasked with completing our current Pod Build, as well as creating R&D projects and completing rigorous testing of linear induction motor systems.
- Validated the design with CAD Models, multiple types of FEA Analysis and MATLAB Programs.
- Directly supported the Electrical-based teams to pass the design stage of the European Hyperloop Week Competition by correctly integrating our work.

McADesigns
Oct 2019 – Present

Software Developer – Inverness/Glasgow
- Constructed modern websites for local businesses to target a larger audience.
- Designed with HTML, CSS, PHP, and a custom JavaScript Editor which greatly improves the End User Experience.
- Running smoothly with over 9 Websites running, and potential interest from multiple societies across Universities in Scotland.

LifeScan   Jul 2019 - Jul 2019

Controls Engineering Intern - Inverness
- Designed and developed a system to detect employee ID cards and correctly output an electrical signal using a COGNEX vision system.
- Built a Camera circuit and displayed the output to an I/O board
- Correctly programmed the Vision System using an excel-spreadsheet based interface.
- The vision system completes its analysis in 150ms - faster than their current production lines.

Engineering Projects

Vision System Notes Tool   Oct 2021 – Present

SharpRocket - Online
- Created a tool that allows for images to be placed into scanned notes automatically.
- Uses a mix of OpenCV and custom-designed algorithms to correctly identify boxes on the page and display their location to the user.
- Test-driven development was used to create a more reliable overall program.
- Saves hours weekly in drawing diagrams, tables, or any other complicated objects while notetaking.

DevOps Software Development   May 2020 – Present

SharpCD and Sharpnet – Online
- Designed and implemented programs to control deployment on remote computing infrastructure.
- Allows for the deployment, monitoring, and securing of webapps automatically from GitHub.
- Used across all of McADesigns' infrastructure, running over 20 web-apps across multiple machines with an estimated uptime of over 99%.

Education

University of Strathclyde   Sep 2020 – May 2025

MEng - Mechanical and Electrical Engineering with International Study
Modules taken to date include:
- Programming in MATLAB, Python and C with groupwork and individual tasks.
- Dynamics focussing on Linear Vibrations and Rotational Motion
- Circuit Analysis with PSpice working in Labs on Filter Circuits and Transient Responses.
- Digital Electronics Design building Transceiver and Receiver Circuits for a Transducer and analysing the design to suggest improvements.

Culloden Academy   Aug 2016 – March 2020

Scottish Qualification Authority (SQA) Advanced Higher / Higher
- SQA Advanced Higher Physics (A), Maths (A), Computer Science (A).
- SQA Higher English (A).

Achievements

Dean's List Student in 1st Year.
First student in Highlands, Scotland to study
Advanced Computer Science.

Major League Hackathon Winner.
Social Secretary of Strathclyde Ultimate.
Saltire 500 Hour Award for Volunteering.