

ADAM MCARTHUR

[linkedin.com/in/adammcarthur7](https://www.linkedin.com/in/adammcarthur7)
<https://github.com/Sharpz7>

adam.mcarthur62@gmail.com
+44 7392 836282
Glasgow

Education

University of Strathclyde

Sep 2020 – May 2025

MEng - Mechanical and Electrical Engineering with International Study

Predicted UK First Class (GPA ~ 87%). Modules taken to date include:

- Electrical Machines focussing on AC Motors and Generators.
- Circuit Analysis with PSpice working in Labs on Filter Circuits, Transient Responses and Digital Circuits.
- Digital Electronics Design building Transceiver and Receiver Circuits for a Transducer and analysing the design to suggest improvements.

Culloden Academy

Aug 2016 – March 2020

SQA Advanced Higher / Higher

SQA Advanced Higher Physics (A), Maths (A), Computer Science (A). SQA Higher English (A)

Engineering Experiences

Strathclyde Hyperloop Society (Strathloop)

Nov 2020 - Present

Propulsion Systems Lead – Glasgow

September 2021 - Present

- 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 and multiple types of FEA Analysis.
- Our team is on target to present our projects at the European Hyperloop Week Conference held in the Netherlands in the Summer of 2022.
- The projects will also allow the team to develop our first Linear Induction Motor pod, representing significant growth.

Power Systems Lead – Glasgow

July 2021 – September 2021

- At short notice was called to run the Power Systems team and start work on acquiring a battery for our 2022 Pod Build.
- Analysed Power System requirements and connected with companies across Britain to highlight system issues for the next Team Lead.

Suspension Team Assistant Lead - Glasgow

Nov 2020 – July 2021

- Tasked with researching types of linkage and creating the mathematical model that will be used to test the suspension system.
- Created multiple research documents on different types of linkage and lead the design of a modelling system in MATLAB using vibration analysis to select spring and damping constants that would be appropriate for our use case.

McADesigns

Oct 2019 – Present

Software Developer – Inverness/Glasgow

Oct 2019 – Dec 2020

- Constructed modern websites for local businesses to target a larger audience.
- Designed with HTML, CSS, and PHP with 6 websites up and running.
- Designed a closed-loop control system that runs across multiple programs to manage websites uptime, errors, and SSL Certificates remotely.

- Allows for complete automation of websites and web apps in the company, with 99% uptime this year.
- Designed robust testing suites for all programs to ensure their function on the main company server.

Fintech Developer – Glasgow

Dec 2021 – Present

- Starting work on developing a data analysis API for stock market data.
- Generating report based on research detailing possible market-inefficiencies that can be exploited from data such as SEC filings and company-quarter results.

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.
- Used skills in Electrical Engineering to build the Camera circuit, and display output to an I/O board.
- Used skills in Software Engineering to optimise the scanning of ID cards by using the lighting conditions to detect one corner of the card to use for scale and alignment.
- The vision system completes its analysis in 150ms - faster than their current production lines.

Work Experience

Kingsmills and Ness Walk Hotels

May 2019 – Aug 2020

Waiter – Inverness

- Part Time Waiter at the Kingsmills working at Weddings, Parties, and other events.
- Promoted to work at the new 5 Star Ness Walk Hotel serving residents and VIP's describing dishes with ingredients from all over the world.
- Enhanced our team's efficiency by making sure all customers were happy and the kitchen ran smoothly, providing the hotel with great online reviews.

Kingsmills Group Marketing

Jul 2019 – Jul 2019

Software Developer - Inverness

- Recommended a restructuring the companies' approach to compressing images by moving from manual to automated methods.
- Implemented a C++ Script that could compress the images to a chosen file size.
- The system is used for their websites and social media's and runs through 200 images in under a second using multi-threading.

Achievements

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

Saltire 500 Hour Award for Volunteering.
Finalist - Scottish Maths Competition.
Maths and Physics Award at Culloden Academy.

Skills

Office 365 (Word, Excel, PowerPoint)
CAD Software (SolidWorks, Inventor)
Modelling Tools (MATLAB, PSpice)

Programming (Python, Golang, PHP)
Admin Tools (OneDrive, GitHub)
DevOps (Docker, Git, CircleCI)