

# Aedan McHale

Graduate Engineer | MEng Electrical and Electronic Engineering

Shrewsbury, Shropshire (GB)

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🌐 [aedanmchale](#) 👤 [AedanM](#) [Code::Stats](#)



## SUMMARY

I am an Electronic Engineer and Software Developer currently working at Nidec Drives. Originally from the U.S.A., I came to U.K. as a dual citizen and earned a Masters of Engineering from the University of Nottingham with a Thesis focused on using Machine Learning to develop an automated predator detection and deterrent system.

## SKILLS

### Software Engineering

Azure DevOps C# SQLite  
AI & Machine Learning GitHub  
Powershell Python  
Qt Framework WPF / WinForms

### Embedded Firmware Development

Arduino C++ C Assembly  
MicroPython  
Performance Profiling  
Automated Testing CMake

### Written Communication and Documentation

CSS Doxygen HTML LaTeX  
Markdown Microsoft Office Suite  
Photoshop After Effects

### Industrial Automation

CoDeSys FieldBus  
IEC Structured Text IronPython  
PLCs TIA Portal TwinCAT  
Variable Speed Drives

### Extended Languages

Autohotkey Batch Go  
JavaScript MatLab Perl  
Ruby Typescript

### Personal

Quick Learner Critical Thinker  
Problem Solver Adaptable  
Resilient

## WORK EXPERIENCE (2)

Oct 2023 - Oct 2025

### Graduate Engineer at

📍 Newtown, Wales 🔗 <https://acim.nidec.com/en/drives/control-techniques>

Gained experience in a wide range of technical fields, and skills in communicating complex systems to multidisciplinary teams, management, and end users.

- Debugged and resolved customer issues in EtherNet/IP modules, then enhanced the automated testing framework to address both current and potential issues
- Developed new features and optimized code for the user keypad interface
- Conducted research and delivered a presentation on the PROFIDrive fieldbus protocol and performed competitor product analysis
- Tested the thermal capability of high-power modules to ensure reliability and developed thermal models using Siemens Flotherm for comparison
- Created comprehensive documentation and proposed a solution for GitHub software distribution
- Designed visualizations in CoDeSys and TwinCAT environments for a SoftMotion interface

Jun 2021 - Oct 2023

Undergraduate Engineer at

📍 Newtown, Wales [🔗 https://acim.nidec.com/en/drives/control-techniques](https://acim.nidec.com/en/drives/control-techniques)

Summer work placements between university terms, focusing on digital design and power electronics, putting university learning into practice.

- Created an automated Double Pulse Testing system, using an STM-Nucleo development board, and a custom C# WPF PC Application
- Designed a mobile app user experience for NFC communications training
- Created an Azure development repository with Git versioning and extended documentation

PROJECTS (3)

Personal Website

Mar 2024 - Current

[🔗 https://aedanm.uk](https://aedanm.uk)

Django Python SQLite HTML CSS

File Operations Tool

Sep 2024 - Jan 2025

[🔗 https://github.com/AedanM/FileOperationsGUI](https://github.com/AedanM/FileOperationsGUI)

Python Qt UI/UX

Custom Regex Tool

Feb 2024 - Current

[🔗 https://github.com/AedanM/CustomRegex](https://github.com/AedanM/CustomRegex)

C++ C Regex

EDUCATION (1)

2019 - 2023

MEng - IET Accredited Masters in Engineering Electronic and Electrical Engineering at University of Nottingham

Thesis Project: Machine Learning Predator Deterrent System Group project: Low Power Vehicle Monitoring System  
Group project: Doppler Speed Gun Embedded computing Advanced computational engineering HDL for programmable devices  
Analogue electronics Advanced engineering mathematics IT infrastructure and cybersecurity Advanced Control ADD MORE

AWARDS

2019

Eagle Scout at Boy Scouts of America  
Highest Rank in American Scouting

INTERESTS

Outdoorsmanship

Hiking Camping

Concert Band

Clarinet Saxophone

Gardening

Lazy Gardening Rewilding

Travel

City Breaks Road Trips

Film and Cinema

SFX Lover Historic Cinema

Cooking

Meal Prepping Technical Meals