

David Hearl – Curriculum Vitae

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Full Stack Developer

I am a versatile and solutions-focused Full-Stack Developer with a professional background in mechanical and electrical engineering. Combining strong analytical skills with hands-on technical experience, I design, build, and maintain web applications that solve real-world problems. With a diploma in software development and professional experience in automating complex engineering processes, I bring an engineer's precision to the world of software development.

I am committed to continuously learning and improving in an ever-evolving industry. My goal is to leverage the skills and experience I have gained to deliver technically sound, user-centric solutions that provide lasting value to users and stakeholders.

Technical Skill Set

Languages & Frameworks

- Python, Django, JavaScript (Vanilla), HTML5, CSS3
- Bootstrap, Flask, VB.NET
- PostgreSQL, SQLite

DevOps & Infrastructure

- Proxmox VE, Docker, Linux (Debian/Ubuntu), RAID
- Git & GitHub, Bash scripting
- Self-hosted solutions (TrueNAS, UNRAID, CI/CD experimentation)

Tools & Engineering

- AutoCAD, Autodesk Inventor, 3D Modelling, Lidar Scanning
- CNC/G-Code, iLogic (VB.NET), PLC logic basics

Projects

Sweet Shop	Full-stack eCommerce site with Stripe integration	GitHub	Live Site
Scanning Dashboard	Internal Django tool for MJM Marine	GitHub	Live Site
Mortgage Calculator	Web app visualising amortisation schedules	GitHub	Live Site
Quiz Site	Live multiplayer question app	GitHub	

See more at <https://www.davidhearl.com/>

Employment History

Designer – MJM Marine

November 2021 – June 2025

- Managed global 3D scanning operations across high-profile shipbuilding projects, managing on-site teams and conducting detailed lidar surveys for interior outfitting.
- Coordinated global scanning projects, leading junior teams from Northern Ireland across international sites and ensuring successful execution.
- Spearheaded the development of the company's 3D scanning infrastructure — overseeing equipment specification, procurement, documentation, and deployment strategy.
- Developed and maintained a Django-based internal web platform to track hardware utilisation, manage scan progress, and generate real-time project timelines.
- Created a Python terminal utility that automated repetitive post-processing tasks using OCR (Optical Character Recognition) and GUI control — significantly accelerating daily workflows.

- Delivered hands-on training and documentation for new staff and apprentices, building scalable expertise across technical teams.
- Authored a .NET add-in for Autodesk Inventor using VB.NET to automate part modifications, drawing generation, and job sheet production — increasing engineering throughput.

CAD Engineer – Freudenberg Technical Products

September 2019 – November 2021

- Designed and deployed a custom Windows application using VB.NET and Python to automate CAD workflows and G-code generation for CNC production — reducing lead times from 12 weeks to 3 days.
- Replaced costly machined steel and brittle PLA jigs with high-performance 3D-printed tooling (carbon fibre and nylon), cutting costs by 97% and enabling rapid design iteration.
- Led the migration of engineering documentation from legacy Lotus Notes systems to a modern PLM solution (Saperion), ensuring data integrity across five global sites.
- Maintained and updated the CMA database of controlled engineering drawings for production and quality assurance.
- Designed and built a bespoke friction testing rig with a glycol-cooled pressure chamber to validate rubber sealing systems under sub-zero environmental conditions.

Other Previous Roles

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| • CAD Apprentice – Freudenberg | (January 2017 – September 2019) |
| • Engineering Apprentice – Freudenberg | (September 2015 – January 2017) |
| • Delivery Driver – Dominos | (June 2017 – April 2018) |

Education

Code Institute	2021 – 2022
Diploma in Software Development	November 2022
Tyne Metropolitan Collage	2015 – 2019
HNC Mechanical Engineering	July 2019
BTEC in Electrical Engineering with Double Grade Distinction	July 2017
Functional Skills in ICT Level 2	January 2016
Performing Engineering Operations (PEO)	February 2016
Kings School Tynemouth	2002-2015
4 GCSE's Grade B [Maths, Science (Double Award), Design Technology]	August 2015
3 GCSE's Grade C [Business Studies, Geography, English]	August 2015

Additional Certificates

Green belt Six Sigma qualification	July 2018
Autodesk Inventor iLogic (Visual Basic 6)	August 2018
AutoCAD Essentials Training	May 2018
Autodesk Inventor Essentials (Parametric Modelling)	February 2018
3D Printing & Maintenance training	February 2017
Risk Kaizen health and safety certificate	September 2015
<i>PRINCE2</i>	<i>In Progress</i>

Hobbies & Interests

I enjoy working on personal software and hardware projects, often deploying and maintaining self-hosted services using Proxmox, Docker, and TrueNAS. I regularly explore new frameworks and infrastructure tools to expand my development skillset. Outside of tech, I play rugby and have a real passion for DIY — from property improvements to electrical and plumbing work, combining design with practical skills.

References

References are available upon request.