Tom Bateson CV 2025

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Summary

Mechanical Engineering graduate with hands-on experience in mechanical design, analysis, embedded systems, software development, and product testing. Gained through an industrial placement at XOR Systems and academic projects, demonstrating the ability to apply engineering principles to real-world challenges. Skilled in CAD, simulation, and programming, with a track record of delivering functional prototypes and technical solutions both independently and collaboratively.

Technical Skills

Programming: Python, C++, MATLAB, Git

CAD: SolidWorks (Certified Associate), Fusion 360

Analysis & Simulation: ANSYS fluent (CFD), ANSYS mechanical (FEA)

Technical Projects: **tombateson.com/Portfolio**

I have undertaken several noteworthy projects both independently and at university, including:

3D Printed Electric Motor – Design and manufacture of a functional electric motor using additive manufacturing.

Spin Casting Ceramics – Design and development of tooling for ceramic components.

University Dissertation: CAN Protocol – Development of a CAN communication protocol for vehicle body control applications.

CNC Router Project – Design and construction of a CNC router primarily from 3D printed parts.

Education

University of the West of England – BEng (Hons) Mechanical Engineering, Second Class Honours (Upper Division)

Esher College Sixth Form – Physics (C), Applied Science Diploma (Distinction, Merit)

Orleans Park School – 8 GCSEs at grade C and above

Employment History

Industrial Placement – XOR Systems (2022–2024)

- Designed and implemented software for OTA (over-the-air) update programmes.

- Developed and executed a rigorous testing regime for update procedures to validate error rates and ensure un-corrupted data was being uploaded and demonstrated a 100% success rate with comparison validated code after update.

- Gained experience with multiple microcontroller development environments (ESP-IDF, STM32, Arduino) and software tools (e.g., Git).

- Contributed to front-end web development projects working to successfully fulfil customer requirements.

- Continued part-time work with the company after contract end date.