William Temple

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EDUCATION

University of Southampton **[Sep 2021 - Present]**

MEng Mechanical/Aerospace Engineering with Placement **(2:1 Average)**

- **Key Optional Modules:** Race Car Aerodynamics, Applications of CFD, Wing Aerodynamics
- **Year 4 Group Project:** Formula 1 Car Model Test and Aerodynamic Development (30% Scale)

Sutton Grammar School **[Sep 2014 - Jun 2021]**

A levels: Computer Science (**A***) | Maths (**A**) | Physics (**A**) | Chemistry (**B**)
GCSEs: (8x 9s, 2x 8s, 2x 7s) including 9s in Maths, Physics, Computer Science, Electronics & DT.

TECHNICAL SKILLS SUMMARY

CAD/Analysis: 3DXperience, CATIA v5, SOLIDWORKS, COMSOL, ANSYS FEA/FLUENT, STAR-CCM+
Coding: C#, C++, .NET Framework/WPF/XAML, Python, Java, SQL, MATLAB, Application Design, Data Analysis
Other: Blender, Unity, VR/AR specialist, MS Office, Google Suite, Confluence, Excellent ability to work in a team

PROFESSIONAL EXPERIENCE

Airbus Defence and Space - CAD Process Engineering Intern (13 Month Placement) **[Jul 2024 - Aug 2025]**

- Use of both 3DX and CATIA v5's modelling and surfacing tools to produce complex 1:1 scale models. Involved the use of generative shape design as well as creating and developing extensive assemblies. This included ESA's Spacelab (complete with interior details down to the bolt level) for use in Airbus' VR museum, as well as a model of the entire Airbus Portsmouth Site with semi-furnished interiors. Required use of Blender to finalise surface finishes for Airbus' own software.
- Developed simplified models from complex assemblies, including ESA's TRUTHS satellite and Exo Mars rover, for use in programs and tools with limitations on model complexity.
- Produced a standalone augmented reality (AR) model viewer using Unity and C# that could display 1:1 scale hologram models of spacecraft and components from 3DX in full detail, after decoding QR codes. Complete with custom-built HUD, settings and scripts in Unity to convert models from 3DX file formats. The program was initially developed to visualise component locations, providing assembly technicians with precise spatial references to support satellite construction and replace pre-existing laser projector methods.
- Developed my AR model viewer program to additionally support scale models of exhibits from Airbus' VR museums. Produced many of these models in 3DX, textured them in Blender/Unity and successfully deployed them as hologram models.
- Used C# with WPF/XAML to produce an application to group/organise/manage and launch Airbus' archive of VR simulations in a user-friendly GUI. Utilised asynchronous code/multithreading and XAML bindings. Deployed to the Airbus design office home page for use internationally.
- Performed presentations and held VR experiences for multiple VIPs, including representatives of the crown and British government, news reporters, Lords and senior Airbus management.
- Produced in-depth documentation for all programs I produced on Confluence, containing user guides, change logs and video tutorials.

Subsea7 - Engineering Intern (Rigid Pipelines Department) **[Jun 2023 - Sep 2023]**

- Trained on buckling and fatigue mitigation strategies, pipe parameters, and industry engineering standards.
- Performed FEA of complex pipe routes across the ocean floor using company tools (ANSYS-based).
- Developed an engineering tool in Python to automatically generate appendices with graphs/tables for reports, directly from the output data from ANSYS. The program had an easy-to-use yet feature-rich GUI.
- Presented my project to multiple departments throughout the company, along with user/developer guidance. Following positive feedback, the program was to be integrated into the company's resource site.

MOST RELEVANT EXTRACURRICULAR ACTIVITIES/COMPETITIONS

Southampton University Formula Student Team (Tractive Systems Department) **[Sep 2022 - Jun 2023]**

- Researched and developed the cooling loop for the electric motor, including material research and budgeting. Discussed with heads of department and other team members about their suitability.

- Created Python programs to calculate pressure drop around various pipe sections, and therefore the minimum internal diameter of the tubes.
- Produced CAD components in SOLIDWORKS for the pipes and connectors required.

Eurobot **[Jan - May 2023]**

- International robotics competition involving the design and construction of autonomous robot/s to complete specific tasks on a game board versus opposing teams.
- Utilised SOLIDWORKS to iteratively design a robot and an electronic counting basket before producing engineering drawings to laser cut, construct and test iterations.
- Programmed Arduinos in C++ and designed custom electronic circuits to interface components.
- Sponsored by Boeing to compete abroad in the international final in France following a win in the national competition.

IMechE Design Challenge 2022 **[Oct 2021 - Mar 2022]**

- Competition against other universities involving the design and build of a motorised line launcher that was capable of launching a squash ball over a range of specified distances chosen on competition day.
- Group selected by the University for competition following a win in a non-motorised internal competition.
- Assisted with SOLIDWORKS CAD model and Python graphing tools for simulating projectiles.

Greenpower Car Challenge (Head of Propulsion and Head of Finance) **[2019 - 2021]**

- After-school club involving the design and construction of a single-seat electric racing car for competition.
- Tested multiple iterations of the previous year's car, adjusting parameters to evaluate performance impacts.
- Designed a chain-drive system for the new car, aided in overall construction and budgeted all components.
- Performed tests on the new car, showing an increase in performance over the previous generation.

Autonomous Underwater Vehicle (AUV) Project **[2018]**

- After-school club producing an AUV that would travel to certain specified locations in the water.
- Part of the electronics and programming team.
- Produced a working GPS tracker using an Arduino and attached it to an RC car for testing.
- The project was cancelled due to a lack of funding, but the initial electronics systems functioned effectively.

MOST RELEVANT CURRICULAR ACTIVITIES

Formula 1 Car Model Test and Aerodynamic Development for 2026 Regulations **[Sep 2025 - Present]**

- Head of CAD Design for the project
- Adapting a 30% scale F1 car model from 2023 regulations to one that conforms with the 2026 regulations
- Performed wheels-off wind tunnel test on previous model, including ride height sweeps and wake analyses using ProCap
- Analysed the wind-tunnel data using Python programs (Plotly graphing with basic Tkinter UI)
- Began CAD design in SOLIDWORKS using advanced surfacing tools
- Performed CFD simulations using STAR-CCM+ on the previous model

Design and Optimisation of a Superconducting Stator for use in Electric Aircraft **[Sep 2023 - Jun 2024]**

- Individual Project/Dissertation for Year 3 (69.2% final mark)
- Researched existing designs to come up with suitable goals for power, weight and efficiency.
- Use of COMSOL to iteratively design, model and optimise a superconducting slotless 0.5MW stator for an electric aircraft motor.
- Used COMSOL analysis tools to investigate what parameters were key to performance and used Python data analysis and graphing libraries (Plotly/Pandas) to display this information clearly.
- Optimised my design to achieve the lowest weight that still met the desired performance goals.

ADDITIONAL

Amateur weightlifter (4 years), short-distance sprinter (2 years) at University athletics society and re-learning piano. Ex-competitive swimmer who now swims recreationally. I have a strong interest in motor racing technology, having read books specific to race car engineering, as well as watched videos, listened to podcasts and worked on personal projects to expand and consolidate my knowledge. Working on developing lap simulators using Python libraries such as FastF1.