TOBIAS PRESSWOOD

Motorsport Engineering Student

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CONTACT INFORMATION

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Oxford & Bristol, UK

SKILLS

- CAD skills on Solidworks and Siemens NX
- MATLAB/Simulink knowledge
- Engine assembly & race car preparation at a race track and workshop
- Vehicle dynamics & setups
- Materials, fluids & thermodynamics knowledge
- Able to communicate effectively
- Team player
- Full UK Driving Licence

EDUCATION

Oxford Brookes University 2025 - 2029
B.Eng (Hons) Motorsport Engineering

Wiltshire College 2023 - 2025
Level 3 BTEC Extended Diploma in Advanced Manufacturing Engineering with Motorsport - Distinction

Wellsway School 2018 - 2023
Science 8 7
Maths 7
Geography 8
History 8
Business Studies 7
Computer Science 6
English Language 6
English Literature 6

PERSONAL PROFILE

I'm a motorsport engineering undergraduate and have worked in the race industry whilst studying at college. I have experience in engine assembly, set ups and CAD. My interest in motorsport developed from hands-on workshop experience building and preparing race cars during college. I studied suspension geometry, material selection and thermodynamics through BTEC coursework and applied it while preparing race cars in the workshop.

WORK EXPERIENCE

Oxford Brookes Racing (OBR) 2025 - PRESENT
Vehicle Dynamics Team Member

- Contributed to the Vehicle Dynamics team as part of the 4 Post Rig (4PR) project, developing analytical and simulation skills using MATLAB and Simulink. This was done by developing a standalone Simulink subsystem for Oxford Brookes Racing's four-post-rig project, using MATLAB scripting to define parameters, implement calculations and support simulation execution. I then integrated the subsystem into the wider vehicle model, managing its inputs and outputs and collaborating with the Vehicle Dynamics team during integration.
- I also will be collaborating on upcoming projects including the agile tyre software implementation and development of comprehensive tyre data sheets to support vehicle setup and performance optimisation.

Junior Technician
TMC Race Engineering 2023 - 2025

- This position involved maintenance work on a Ginetta, Clio, Ma7da and an Alfa Romeo.
- This included removing brake pads & air filters, cleaning radiators, bleeding brakes, seat fittings and spanner checking etc.
- This also involved going to race weekends. This involved working long days and hours to prep the car. This also meant good teamwork was required which allowed us to win the first race of the season. These race weekends also required tight turnarounds due to deadlines. This developed my ability to stay focused at the task at hand, communicate with my teammates and complete practical work accurately with tight deadlines. This was also a good test to see if motorsport was something I wanted to do and after this I was determined to achieve my goals more than ever.

WORK EXPERIENCE CONT.

Wiltshire College and University 2023 - 2025

- Worked on a variety of CAD & VD projects. In one I had to design a Lego car. This improved my knowledge in how Solidworks functions. We also had to design a separate gravity car. This allowed me to gain skills in how design, assembly, drawings and CFD works with a focus on aerodynamics.

Engineering Assistant Itech Racing 2023 - 2024

- I volunteered every Saturday. We were transforming an MG into a track car by integrating a powerful Honda engine. Our efforts involved fine-tuning the Honda ECU, installing a roll cage and refining the interior for an enhanced racing experience.

Work Experience Williams F1

- I enjoyed working in multiple departments at Williams including test and validation. Spent time with the test and validation department observing how parts are checked before running on the track.
- I also saw how the race engineering department at Williams worked and we did practice race engineering simulations for experience between fellow students.

TECHNICAL PROJECTS & ANALYSIS

Engineering Ownership

- Within Oxford Brookes Racing's Vehicle Dynamics team, I took ownership of developing the damper model for the team's 4PR vehicle simulation. I processed experimental damper dyno data in MATLAB, interpolating force–velocity datasets into lookup tables to represent the dampers' non-linear bump and rebound behaviour. I then implemented these lookup tables in Simulink and integrated them into the wider 4PR model. Damper velocity was used as the lookup-table input to calculate the corresponding damper force, which was then used within the suspension model. I also structured the model so that each corner could use a different damper dataset, allowing one or multiple suspension configurations to be simulated and compared within the full vehicle model.

Performance & Reliability Impact

- Supported late-night vehicle setup changes at Donington, working with the TMC team until around midnight to prepare the car for the following morning's race. The changes contributed to improved race readiness and a race victory the next day.
- During post-test spanner checks, I identified that the engine was being retained by only one remaining mounting bolt. I flagged and helped rectify the issue before further running, preventing a potentially serious mechanical failure and ensuring the car could be safely prepared for its next session.

Problem Solving

- I developed and adapted a 2D arcade game that I called Bouncing Bird. I reworked the code into a standalone HTML5 format while retaining the required gameplay mechanics. I used debugging and testing to resolve compatibility and gameplay issues which required me to understand the existing code, identify faults and implement effective changes. The game is still in development.

Teamwork Under Pressure

- At college I completed weekly work experience with TMC Race Engineering. This role also involved attending race weekends which, working late nights and to tight deadlines. Far from deterring me, working in these conditions actually gave me a real thrill and I told myself I wanted to work like this in the future. A particular experience here I would like to tell you about was during the queue for scrutineering of the Ma7da where we were in torrential rain and the electrical rain light on the car stopped working. This would have failed scrutineering. I was only 17 at the time but I ran back to the pits and returned with WD-40 which we used to clean the electrical connections and displace any water. This worked, we passed scrutineering with seconds to spare and the fix lasted. I am proud to say that we went on to win the first race.

HOBBIES

Fitness - This is one of my favourite hobbies as it allows me to stay healthy and active. I am part of the OBR running club, which is a great way to socialise with peers, and I've made some great friends through it. We also meet up for gym sessions and social events.

Travelling - As well as inter-railing with a group, I went solo travelling, which allowed me to meet many new people, learn, see different cultures and have new experiences.

Socialising - I love to go out with friends and spend time with them, whether that is with housemates, coursemates or other friends I have met. I am an outgoing person who likes to support others.

One thing I have learnt from my hobbies is how important it is to have a team around you to learn from and contribute to. I am really enjoying my time at university.