

Lucas Hutton

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PROFILE

Engineering graduate with a strong foundation in mechanical engineering and hands-on experience supporting projects from concept through to implementation. Technically and analytically minded, with experience in energy systems, sustainability, and performance optimisation. Motivated to apply data-driven engineering to projects that improve efficiency, safety, and environmental impact.

EDUCATION

University of Bristol

September 2021 – May 2025

MEng (Hons) Mechanical Engineering – First Class

WORK EXPERIENCE

Engineering Intern - Turnstone Construction Ltd.

June 2023 – July 2023

- Designed and developed a fully portable façade inspection system for use on live construction sites, integrating computer vision to identify defects including spalling, cracking and loose fixings.
- Collected and analysed site data to inform design improvements and optimise system performance.
- Worked closely with stakeholders to ensure solutions were practical, safe, and efficient, balancing technical and operational considerations.

ENGINEERING PROJECTS AND EXPERIENCE

University of Bristol Sustainability Proposal

September 2024 – December 2024

- Co-authored a sustainability strategy for the University of Bristol, outlining actionable steps to achieve net zero carbon emissions by 2030.
- Conducted detailed HVAC and energy usage analysis of campus buildings, modelling heat loss and evaluating the impact of smart BEMS integration with existing MEP systems.
- Designed and simulated a hybrid wind-solar power plant for the veterinary campus, optimising energy output, ensuring regulatory compliance, and performing life-cycle cost analysis to evaluate financial and environmental benefits.

Optimisation Study for Passive Vibration Absorbers

January 2024 – May 2024

- Developed a MATLAB algorithm using graph theory to optimise vibration absorbers for automotive suspension systems.
- Simulated designs on a quarter-car model, improving predicted tyre-wear performance by 42%.
- Introduced a novel heuristic and parallelised computation, achieving a 44× algorithm speedup and enabling analysis of higher-complexity systems.

LEADERSHIP EXPERIENCE

University of Bristol Lifting Club Treasurer

July 2023 – June 2024

- Set membership pricing and pitched annual budget resulting in a 27% increase in revenue and record high membership numbers.

SKILLS

CAD (Fusion360, AutoCAD, SolidWorks) • FEA (Abaqus) • Energy analysis and BIM (Revit) • Programming (Python, MATLAB/Simulink) • Hydraulics modelling (Simscape)

INTERESTS: Golf, Tennis, Art