

# 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

<b>University of Bristol</b>	<i>September 2021 – May 2025</i>
MEng (Hons) Mechanical Engineering – First Class	

## WORK EXPERIENCE

<b>Engineering Intern - Turnstone Construction Ltd.</b>	<i>June 2023 – July 2023</i>
<ul style="list-style-type: none"><li>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.</li><li>Collected and analysed site data to inform design improvements and optimise system performance.</li><li>Worked closely with stakeholders to ensure solutions were practical, safe, and efficient, balancing technical and operational considerations.</li></ul>	
<b>Engineering Projects and Experience</b>	

<b>University of Bristol Sustainability Proposal</b>	<i>September 2024 – December 2024</i>
<ul style="list-style-type: none"><li>Co-authored a sustainability strategy for the University of Bristol, outlining actionable steps to achieve net zero carbon emissions by 2030.</li><li>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.</li><li>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.</li></ul>	
<b>Optimisation Study for Passive Vibration Absorbers</b>	<i>January 2024 – May 2024</i>

<b>Optimisation Study for Passive Vibration Absorbers</b>	<i>January 2024 – May 2024</i>
<ul style="list-style-type: none"><li>Developed a MATLAB algorithm using graph theory to optimise vibration absorbers for automotive suspension systems.</li><li>Simulated designs on a quarter-car model, improving predicted tyre-wear performance by 42%.</li><li>Introduced a novel heuristic and parallelised computation, achieving a 44× algorithm speedup and enabling analysis of higher-complexity systems.</li></ul>	
<b>Leadership Experience</b>	

<b>University of Bristol Lifting Club Treasurer</b>	<i>July 2023 – June 2024</i>
<ul style="list-style-type: none"><li>Set membership pricing and pitched annual budget resulting in a 27% increase in revenue and record high membership numbers.</li></ul>	
<b>Skills</b>	

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

**INTERESTS:** Golf, Tennis, Art