

# NICHOLAS GRESHAM

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## ENGINEERING EXPERIENCE

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| <b>JAN 2024 –<br/>CURRENT</b>  | <b>MECHANICAL DESIGN ENGINEER, XCEL TECH PTY LTD</b> <ul style="list-style-type: none"><li>- Developed a first of its kind 22kW portable solar array designed for transport with a 176kW battery on an 8x5ft trailer.</li><li>- Developed rapid prototyping skills with laser cutters and SLA/ SLS printers.</li><li>- Sole engineer responsible for managing both mechanical and electrical aspects of client projects, from concept to production.</li><li>- Created detailed design documentation, including rough sketches, precise drawings, and 3D CAD models for parts and assemblies.</li></ul>   |
| <b>JUL 2023 –<br/>JAN 2024</b> | <b>MECHANICAL DESIGN ENGINEER, ENERGY STORAGE INDUSTRIES ASIA PACIFIC.</b> <ul style="list-style-type: none"><li>- Led a small team of Electrochemical Engineers in developing key product components.</li><li>- Utilized ANSYS Fluent to enhance 3D CAD designs.</li><li>- Developed and implemented a strategic build plan, successfully transitioning next-gen Iron flow batteries from prototype to mass production.</li><li>- Created and maintained communication channels between manufacturers, academics, and industry experts to ensure critical design considerations were met.</li><li>- Collaborated with leading industry experts to refine and optimize product designs.</li></ul> |
| <b>NOV 2022 –<br/>JUL 2023</b> | <b>MECHANICAL ENGINEERING INTERN, ENERGY STORAGE INDUSTRIES ASIA PACIFIC.</b> <ul style="list-style-type: none"><li>- Developed testing scripts for battery performance testing.</li><li>- Wrote HAZOP reports and safety reviews in accordance with Australian and New Zealand safety standards.</li><li>- Completed performance reviews of inverters and pumping systems for conversion between operation at 60Hz and 50Hz.</li><li>- Interfaced with stakeholders at Origin Energy, Energy Queensland, and Sun Cable.</li></ul>  |

## EDUCATION

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| <b>02/2020 –<br/>06/2024</b> | <b>Queensland University of Technology, Brisbane, QLD</b> <ul style="list-style-type: none"><li>- Bachelor of Engineering (Honours), Mechanical Engineering. Minors: Electrical Engineering, Industrial Design. Honours GPA 6.2.</li></ul> <p><b><i>Honours: Thesis - Optimisation of Flow Dispersion over Iron Redox Flow Battery Electrodes - selected to represent the school of Medical, Mechanical and Process Engineering at QUT's 2023 Engineering showcase.</i></b></p> |
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## SKILLS

- CAD design (*SolidWorks, Autodesk Inventor, Autodesk Fusion 360*)
- Rapid prototyping
- ANSYS Fluent
- Project management
- Stakeholder engagement
- High attention to detail
- Speaking and leadership (Current Member of Brisbane Toastmasters club.)