

# Justin Moeljono

450-427-586 | justinmoeljono@gmail.com | linkedin.com/in/justinmoeljono

## Education

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**The University of New South Wales | Sydney, Australia**

Expected May 2027

Mechanical Engineering Undergraduate

WAM: 80.4%

**The University of Texas at Austin | Austin, United States**

January - May 2025

Mechanical Engineering - Exchange Program

## Experience

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**AtomCraft | Sydney, Australia**

May 2025 - Present

Mechanical Engineer

- Created CAD models and engineering drawings of the coil supports for the tokamak that aims to become the world's first fusion energy device entirely designed, built, and operated by students.
- Performed detailed structural analysis using simulation tools (FEA) and hand calculations to assess stress induced by the magnetic fields, thermal expansion, vibration, and fatigue in reactor components.
- Implemented testing and validation of prototypes to ensure their performance, reliability, and alignment with design specifications and relevant safety standards. Documented results in a technical report.

**Transgrid | Sydney, Australia**

September - November 2024

Consulting Intern

- Implemented root cause analysis to understand the increasing complexity of grid operations wrought by the renewable energy transition.
- Conducted SWOT analysis of potential solutions and presented findings to Transgrid executives.
- Created and iterated on a new UI for the contingency scenarios dashboard, which improved the grid operator's situational awareness.

**UNSW Finance Systems | Sydney, Australia**

September - October 2024

Consulting Intern

- Conducted field research through surveys and interviews with sustainability experts (Salesforce and Microsoft) on AI applications in sustainability reporting and presented the findings to industry partners.

## Projects

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**Peter Farrell Cup:** Accelerated reading app for children ages 2-6 with interactive voice AI and spaced repetition.

**Robot Royale:** Led a team of 5 to design and manufacture an RC battle bot with a CNC-machined weapon.

**Nucleus Bot:** Programmed an AI search application for UNSW related queries that can cite relevant sources.

**CNC Coin:** Designed and CNC-machined an aluminum block for injection molding a custom plastic coin.

## Skills

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**Mechanical:** SolidWorks, Fusion 360, Laser Cutter, Ansys (FEA), 3D Printing, Power Tools

**Software and Electrical:** C, Javascript, MATLAB, Python, Arduino, Microsoft Suite, Soldering and Wiring.

**Languages:** English IELTS: 8.5, German TELC: C1 (Professional Working Standard), and Indonesian (Native).