

Abhi Naglapura

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Career Objective

Second-year Bachelor of Engineering student with a strong foundation in mechatronics, robotics, and embedded systems. Experienced in systems integration, CAD design, and automation. Passionate about precision engineering, advanced control systems, and sustainable technologies. Actively contributing to projects that combine software and hardware for real-world applications.

Technical Skills

Languages: C, C++, CSS, Java, Python, G-Code, HTML, MATLAB

CAD: Solidworks, Fusion 360, OnShape, KiCad

Manufacturing: FDM 3D-Printing, Manual Lathe and Mill, Laser Cutter, CNC Mill, Soldering

Dev Tools: Visual Studio Code, PlatformIO, Arduino IDE, Git, Intel Quartus Prime Lite, STM32CubeIDE, Putty

Education

Bachelor of Engineering (Honours)

Jan 2024 – Dec 2027 (expected)

University of Technology Sydney (UTS)

- Major in Mechatronics with a WAM of 70.6 and GPA of 5.09
- High Distinction in *Intro To Mechatronics Engineering*
- Distinction in *Intro To Mechanical Engineering, Mathematics 2*

NSW Higher School Certificate

Jan 2018 – Dec 2023

The Ponds High School

- First in HSC Engineering Studies (87% average)

Professional Experience

Jan 2025 – present

Launch Officer

UTS Rocketry

- Coordinated and executed LPR and MPR launches, managing safety and timing of propellant deployment
- Led recovery operations and data collection for post-launch analysis
- Supervised pre-launch motor preparation, black powder handling, and launch checklist execution

Squadron Supply Officer

Nov 2024 – present

320 SQN - AAFC

- Organised uniform orders for 50+ cadets
- Worked with staff and HQ to replace supply and place orders

Employment

Dec 2023 – present

Private Tutor

Alchemy Tuition

- Crafted instructional activities with attainable goals, empowering students in learning specific academic skills while increasing testing scores by more than 20% on average

Extracurricular Involvement

Civilian Staff

Mar 2024 – present

320 SQN - AAFC

- Leading and mentoring cadets in various capacities, including aviation, teamwork, and discipline.
- Organised and conducted training sessions to develop leadership skills in young cadets.

Internal Structures Lead

Jan 2025 – Present

UTS Rocketry

- Led the design, fabrication, and testing of internal rocket structures
- Ensured structural integrity and integration of electronics, recovery systems, and propulsion components
- Collaborated with multidisciplinary team to optimise weight, balance, and safety

Key Projects

Satellite Tracker – Intro to Mechatronics 41099

Jul 2024 – Nov 2024

- Built a custom real-time satellite tracker using Orbitron and stepper motors
- Implemented microcontroller control for automated azimuth/elevation adjustment
- System configured for multiple satellites and educational use

Warman Robot – Mechanical Design Fundamentals Studio 1 41059

Feb 2025 – June 2025

- Integrated sensors, control systems, and pathfinding algorithms for autonomous robotics

Owl Chatbot

June 2025 – Current

- Designed an interactive chatbot interface and backend logic to assist students in learning

References

Available upon request