Jaedh Rameezdeen

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Personal Summary

During my childhood, the mechanisms of technology and machines fascinated me – that curiosity strengthened with the undertaking of a mechanical engineering degree. With inquisitiveness and analysis almost intrinsic to me, my academic journey has been a consistent demonstration of commitment and diligence. I have gained practical experience, via my mathematical and technological passions, through my 12-week internship at Supashock, undergraduate part-time work under MaxMine, and involvement in University of Adelaide's Rover Challenge, Solar Car, and Adept Rocketry projects. Furthermore, my soft skills are attributed to participation in Adelaide University Space Society Committee event coordination, honing communication, and leadership skills.

As an intern, I possess an eagerness for the application of practical knowledge and skills, along with learning from professionals. My commitment to growth and learning is continuous, as well as expanding my industry networks. I aim to cultivate technical skills, like mechanical design, data analysis, and systems engineering along with becoming an accomplished professional who is an effective goal-orientated collaborator.

Education

The University of Adelaide
Bachelor of Engineering (**Honours**) (**Mechanical**) with a Bachelor of Mathematical and Computer Sciences – Computer Science Major
Mechatronics Major **Graduation**: 2025 **GPA**: 6.3

Technical Skills

- Mechanical Design
- Six Sigma Product Design
- CAD (proficient in Autodesk inventor)
  - FEA Analysis
  - Engineering Drawings
  - Assembly Design
- Proficiency in Machinery
  - Handheld tools
  - 3D printing
  - Basic metal fabrication
- Python programming
  - Libraries such as Pandas
  - NumPy
- C++
  - Libraries such as SFML
  - Object Oriented Programming
  - Algorithms and Data Structure
- MATLAB
- SQL

Professional Experience

Supashock November 2024 – March 2025
Mechanical Engineering Intern

- Prepared, carried out, and oversaw environmental testing for project components. Exercised statistical techniques and programmes like MATLAB and Excel to analyse the test data. Authored thorough client facing test reports and cultivated test plans using ISO and Military standards.
- Performed a crucial part in the end of line production by carrying out assembly duties and ensuring proper standards to ready product for shipping.
- Quality control techniques were developed and implemented to maintain uniformity and dependability in manufactured goods. Precise measurement instruments and equipment were utilized to verify dimensions correctness and tolerances.

MaxMine May 2022 - Present
Undergraduate Signal Analyst

- Primary responsibility involved translating raw heavy machinery data into event labels to train algorithm models and enrich product accuracy for clients. This task was essential due to the dynamic nature of mine sites and the variability of equipment models.
- Collaborated on a summer project for the new MaxMine product, adhering to 6 sigma product design standards, and achieved valuable outcomes through research and collaboration.
- Perform various imperative tasks, including website testing, detailed stock takes for supply chain logistics and product feasibility tests.

Cluey Learning February 2022 – June 2022

Tutor

- Offered students in grades 10 through 12 high-quality online maths along with physics tutoring for all levels and curriculums.
- Actively engaged students and improved subject understandability by employing a variety of teaching strategies and resources, including interactive whiteboards, worked examples, and establishing helpful connections to foster a stronger understanding.
- Obtained trusting relationships with students and parents, offering constant encouragement to help students succeed academically as well as providing feedback after sessions to parents keeping them up-to-date and involved.

Hungry Jacks November 2019 – November 2021

Crew Member

- Provided excellent customer service and quality food preparation while upholding a sanitary work environment when working as a crew member at a busy fast-food restaurant catering to multiple lanes of orders and priorities.
- Pooled resources seamlessly with a dynamic team to sustain the restaurant's continuous 24/7 operation, preparing meals, sanitizing equipment, and restocking inventories.

Volunteering Experience

Adept Rocketry Division March 2023 - Present

Level 3 Rocket - Structural and Aerospace Lead

- Managed the design and fabrication process as the structural and aerospace lead for the level 3 rocket, to ensure compliance with stringent stability, performance, and safety requirements for the AURC competition.
- Designed and manufactured 3D carbon fibre fins for a Mach 1 level 2 minimum diameter rocket, comprising mostly fibre glass and carbon fibre construction.
- Simulated and created a nose cone for a level 1 rocket, which had a multi-functional capability for an aerodynamic tip as well as housing for altitude sensing electronics.
- Joined forces with other members to conduct a successful launch and retrieval of the rocket, awarding the team a level 1 rocketing certification - improving our future rocket capabilities.

Australian Rover Challenge July 2021 - Present

Robotic Arm Team Member

- Designed, prototyped, and tested six versions of a robotic arm end effector, resulting in the successful manufacture of a major part using Fleet Technologies' metal 3D printer.
- Collaborated with a team to design the base plate connecting the arm to the rover, utilizing a belt drive for 360-degree rotation.
- Conducted research, simulations, and sourcing of carbon fibre tubing to be treated as the limbs of the robotic arm, enhancing its durability and performance.
- Devised and 3D printed mounts for connecting a delicate encoder to the joints, requiring precision within 0.1 mm, and mounted parts of the arm allowing for stable resting positions.

Adelaide University Space Society December 2022 – August 2023

Committee Member

- Enacted an active role in event planning by researching venues, vendors, and activities, guaranteeing engaging and cost-effective events.
- Coordinated logistics, including catering, attendee registration, and event set-up, to guarantee a smooth event execution.

Awards and Achievements

- MVP of the Robotic Arm Team for the 2022 Australian Rover Competition
- Oliphant Science Awards:
    - Highly Commended and Australian Institute of Energy Sponsor Award for a Carbon Neutral House model in 2015
    - Highly commended for Pumped Hydro model in 2017

References Available Upon Request