

Syed Ismail Hussain Shah

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INTRODUCTION

Dedicated Graduate Mechanical Engineer with first-class honours, showcasing a passion for innovation and problem-solving. Proven technical skills from diverse academic projects, emphasising collaborative teamwork. Highly motivated with proficiency in CAD/CAM, Solidworks, MicroStation Bentley, MATLAB, and ANSYS Fluent. Excelled in academic settings through effective communication and leadership. Committed to ongoing growth and eager to contribute innovative solutions in a challenging graduate program.

EDUCATION

Edith Cowan University

Joondalup, WA

Bachelor of Engineering (Mechanical) Honours, **Cumulative GPA: 3.30/4.00** *November 2023*

Areas of Interest: Mechanical Design and Development, Fluid and Thermodynamics

PROJECT EXPERIENCE

CFD simulation of BTMS using ANSYS Fluent

Final Year Thesis

- Designed an optimal **cooling system** for batteries using ANSYS Fluent.
- Utilised CFD simulation results to enhance the battery thermal management system.
- Iteratively determining optimal parameters for mass flow rate, heat flux, and nozzle diameter to maximise efficiency and performance.
- Reviewed areas for improvement and identified potential future enhancements.
- Project Steps:
 1. Design Geometry Modeling
 2. Mesh Generation
 3. Numerical Analysis
 4. Post-processing

Cherry Picker Drive Wheel Gearbox Design

Advanced Mechanical Design

- Analysing multiple gearbox concepts and finalising the design with a coaxially aligned configuration.
- **Selection of Gear Type:** Opted for spur gears due to benefits such as high-speed ratio, simplicity in design, ease of maintenance, and reliability.
- **Bearing Selection:** Choose a total of 8 bearings—2 tapered bearings to support an intermediate and 6 bearings to secure a shaft from other corners.
- **Shaft Sizing:** Concluded the design by selecting an appropriately sized shaft to align with the bearing holes and gearbox housing, completing the cherry-picker gearbox design.

Warman Design and Build Competition

Mechanical Design and Development

- Automated Prototype for Object Collection and Transportation via Cable
- **Project Planning and Task Assignment:** Responsible for planning the project and distributing tasks among team members.
- **SolidWorks Design:** Utilised SolidWorks for prototype design and prepared a comprehensive Product Design Specification.
- **3D Printing:** Employed 3D printing for the fabrication of critical and precise components.
- **Team Leadership:** Led the team by fostering regular communication and information sharing.
- **Theoretical Knowledge Application:** Applied theoretical understanding to achieve practical outcomes in the project.

WORK AND VOLUNTEERING EXPERIENCE

Al-Syed Stone Crusher*Administration Manager***Sargodha, Pakistan***January 2017 – March 2019*

- Administered client and stakeholder interactions in an administrative role.
- Assisted in crafting precise fee estimates and quotes tailored to client requirements.
- Developed key Excel skills for efficient tracking of product and order records.

Helping Hands HH*Regional Managing Director***Sargodha, Pakistan***January 2018 – July 2019*

- Spearheaded an organisation dedicated to uplifting underprivileged children, facilitating educational opportunities, and fostering a sense of belonging in society.
- Served as a regional team leader, orchestrating major events recognised by local government authorities.
- Successfully raised AU\$ 5,000 in charitable funds to purchase essential food and medicine for districts in Punjab devastated by floods.

TRAINING AND PROFESSIONAL MEMBERSHIP

- Engineers Australia Student Membership (EA ID: 8281695)
- Certificate II in Security Operation – October 2025
- Standard First Aid, CPR and AED training and certificate
- Construction White Card

SKILLS AND INTERESTS

Computer: Microsoft Office (Word, Excel, and PowerPoint), AutoCAD, SolidWorks, ANSYS, MicroStation, MATLAB, Beginner Python and C language

Interpersonal: Receiving feedback, work ethic and honesty

Project Management: Scheduling and time management, Writing and reporting, Delegation, Critical thinking.

Language: Fluent in English, Urdu, and Punjabi

Interests: Teaching, Cricket, Chess and Travelling