

# JOYAL JOJO

joyaljojo.connect@gmail.com | 0449959100 | www.linkedin.com/in/joyal-jojo | Blackburn

## PROFILE

---

Mechanical Engineering student at the University of Melbourne with hands-on experience in CAD, product prototyping, and interdisciplinary collaboration. A versatile and decisive thinker with a focus on efficiency, open-minded teamwork, and a strong foundation in mechanical systems and engineering economics. Quick to learn new tools and eager to contribute to next-generation product development.

## EDUCATION

---

### Master's in Mechanical Engineering

Feb 2024-Present

The University of Melbourne, Victoria, Australia

- Student engineer for developing a 10W wind turbine at the renewable energy students club.
- Advanced Solid Mechanics – Bicycle Frame Design (2025): Designed a structurally efficient bicycle frame using SolidWorks and AutoCAD; learned AutoCAD independently in 3 days to generate production-ready drawings.
- Project Manager and Engineer for Development of a Machine Learning-Based Equation of State for Real Gas Mixtures in collaboration with Future Energy Exports Australia (ongoing).

### Bachelor's in Mechanical Engineering

Jul 2019-Apr 2023

National Institute of Technology Calicut, Kerala, India  
CGPA 7.9/10

- Conducted research to determine failure pressure of metallic pipelines using Artificial Neural Network and Finite element analysis.

### Higher secondary education

Jul 2017 - Apr 2018

Christhu Jyothi Public School, Kerala, India

- Top scorer in Mathematics, Physics and English among district level.
- 94 percent overall score (CBSE Board).

## EXPERIENCE

---

### GHD Group Engineering Consulting Virtual Experience Program on Forage

August 2024

Melbourne, Victoria, Australia

- Conducted a comprehensive options analysis for various rail alignments, including cost-benefit assessments, stakeholder impact evaluations, and environmental considerations.
- Presented findings and recommendations in a technical memorandum to the client, supporting informed decision-making.

### Technical Consultant

June 2023-Sep 2023

Price Waterhouse Coopers India (PWC India), Bangalore

- Shadowed and assisted the Assistant Manager Advisory - Business Transformation section.
- Developed familiarity with Workday software and its implementation processes within the organization.

### Engineering Intern

May 2022 - Jun 2022

Hindustan Aeronautical Ltd, Bangalore, India

- Took initiative to shadow senior engineers in the Mirage 2000 fighter jet overhauls, gaining insights into structural diagnostics and fluid system troubleshooting
- Structural loads testing: Measured strain gauge responses to track the wing load against the wing strength envelope.
- Ground vibrations testing: Validated structural frequencies and mode shapes with the Finite element model.

- Managed over 5000 customer interactions monthly, providing exceptional service with a satisfaction score of 92%.
- Navigated customer issues and handled cashflows, ensuring a positive customer experience.
- Collaborated with a team to achieve a milestone of 2000 new customer registrations in 2 months.

## **SKILLS**

---

**Software:** SolidWorks, AutoCAD, Siemens NX (in progress), ABAQUS, Python, MATLAB, MS Suite, C++

**Technical:** Mechanical design, FEA, product prototyping, ANN with TensorFlow and AutoML

**Soft Skills:** Fast learner, proactive, detail-oriented, strong communication and collaboration skills

## **VOLUNTEER ACTIVITY**

---

### **President**

Bala-jana-sakyam (Student body)

- Led a team of 100 student volunteers in organizing community well-being events like higher education awareness programs, Food security initiatives for disadvantaged people etc.
- Increased student participation in well-being programs by 25% through effective outreach strategies.

## **PROFESSIONAL CERTIFICATIONS & ACHIEVEMENTS**

---

- Applications in Engineering Mechanics, Georgia Institute of Technology
- Machine Design, Georgia Institute of Technology
- Customer Analytics, University of Pennsylvania
- AI For Everyone by DeepLearning.AI

## **ACADEMIC PROJECTS**

---

### **VIVA Energy Geelong Plant - LPG Pressure Vessel Integrity assessment**

- Conducted Finite element analysis to evaluate the structural integrity of a pressure vessel under seismic conditions, and operational loads, ensuring compliance with AS 1210-2010, AS1170 standards.
- Determined minimum acceptable thicknesses, safety factors, and lifetime predictions, recommending retrofitting and corrosion mitigation strategies to enhance safety margins and operational longevity.

### **Prusa 3D - Redesign and Fabrication of 3D printer parts**

- Redesigned and Fabricated 3D Printer Components for high-volume production using CNC machining, injection moulding, polyurethane casting, and sheet metal fabrication.
- Conducted critical design modifications, incorporating tolerance and inspection standards to ensure precision and quality, improving its functional integrity.
- Analysis of fabrication time, scrap rates, and sustainability for multiple production techniques, recommending cost-effective and scalable solutions.

## **REFEREES**

---

Available upon request