



# MUHAMMAD ZEIN AULIA

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## SUMMARY

A student of Mechanical Design and Construction Engineering with a focus on engineering design and technical competencies in mechatronics, manufacturing, and control systems. Skilled in the design and analysis of machine components, creation and interpretation of technical drawings according to standards, and proficient in CAD software such as AutoCAD and SolidWorks. Knowledgeable in the integration of mechanical-electrical systems, fundamentals of actuators and sensors, and basic control system concepts. Possesses understanding of manufacturing processes, material selection, and design considerations for manufacturability. Accustomed to working analytically, meticulously, and with a focus on efficient, practical technical solutions.

## PROJECT EXPERIENCE

### Human-Powered Vehicle Design and Competition (Mechanical Team)

- Mechanical Assembly & Maintenance
- Drivetrain & Chassis Support
- Competition Technical Support

### CVT Pulley Failure Analysis for Mio 2008

- Dimensional Measurement & Inspection
- 3D Modeling & Reconstruction
- CAE & Stress Analysis
- Failure Analysis

### Reverse Engineering Powder Metallurgy Mixer

- Reverse Engineering & 3D Modeling
- Structural Analysis (CAE)
- CAE & Stress Analysis
- Electrical & Control System Analysis
- System Function Evaluation

## EDUCATION

### Politeknik Negeri Bandung

Agust 2023-Now

Mechanical Engineering Study Program Mechanical Design and Construction

### MAN 1 Tasikmalaya

July 2020-June 2023

MIPA

### Pesantren KHZ Musthafa Sukamanah

July 2020-June 2023

Ibtidaiyyah

## HARD SKILL

- Mechanical Design & Drafting
- CAE / Simulation & Analysis
- Manufacturing & Fabrication
- Mechatronics & Electrical Systems
- Structural & Load Optimization
- Prototyping & Assembly

## SOFT SKILL

- Problem Solving & Analytical Thinking
- Teamwork & Collaboration
- Project Management Basics
- Communication & Documentation
- Time Management
- Creativity & Innovation

## SOFTWARE

- AutoCAD
- SolidWorks
- Inventor
- Catia V520
- Mastercam X5
- Cimatron E

## PORTOFOLIO

