KABIL K *Mechanical Engineering*

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Summary

Results-oriented Mechanical Engineering student with hands-on experience in CAD modeling (AutoCAD, SolidWorks), FEA simulation (ANSYS), and manufacturing processes. Completed industrial internship in hydraulic systems manufacturing with exposure to machining, assembly, and quality control. Proven ability to deliver design-driven projects involving mechanism design, optimization, and fabrication. Seeking an internship or entry-level role in mechanical design, product development, or manufacturing engineering.

Professional Experience

12/2025 - 01/2026
Coimbatore

Hydro meshines india private limited , *Industrial Trainee – Hydraulic Systems*

- Gained hands-on experience in hydraulic cylinder manufacturing and hydraulic power pack assembly.
- Involved in machining operations, sub-assembly, pressure testing, and quality control inspections.
- Conducted hydraulic system analysis including flow rate, pressure parameters, and leak detection.

Education

08/2023 - Present
Kovilpatti, Tamil Nadu

B.E. in Mechanical Engineering , *National Engineering College*

04/2023
Kovilpatti, Tamil Nadu

HSC - Bio-Maths | **Percentage: 69** , *The Lakshmi Mills Hr. Sec. School*

Projects

02/2025 - 04/2025

Optimization of Shaft Diameter in Muff Coupling Using MATLAB

- Performed parametric optimization of muff coupling shaft diameter using MATLAB simulations to minimize von Mises stress under variable loading conditions.
- Achieved measurable improvement in structural safety factor by iterating across shaft diameter ranges.
- Tools: MATLAB, mechanical design theory, stress analysis.

02/2026 - 04/2026

Portable Self-Aligning Drill Guide with Auto Center Detection & Perpendicular Control

- Designed a portable drill guide mechanism with automatic center detection, auto-locking mechanism, and perpendicular control feature.
- Improved drilling accuracy and usability for non-precision environments.
- Tools: SolidWorks, CAD modeling, mechanism design.

08/2024 - 12/2024

Flapping Wing Mechanism Design and Fabrication

- Designed and fabricated a 3D-printed bio-inspired flapping wing mechanism using crank-rocker four-bar linkage to convert rotational motion into flapping.
- Performed kinematic analysis to validate range of motion and gear ratio selection.
- Tools: CAD modeling, 3D printing, kinematic analysis.

CERTIFICATIONS

Diploma in AutoCAD – Authorised Training Centre

MATLAB Onramp - MathWorks (Online)

Product Design and Manufacturing - Course Completion Certificate

Automation in Manufacturing - Course Completion Certificate

Work System Design – Course Completion Certificate

CO-CURRICULAR ACTIVITIES

Member - Mechanical Engineering Club, National Engineering College

Member - Industrial Engineering (IE) Club

Member - Hockey Team (Sports), NEC

AREAS OF INTEREST

Manufacturing process

Production Engineering

CAD & simulation

Maintenance Engineering

Skills

AutoCAD | SolidWorks | Hydraulic Systems | Team Collaboration | Leadership | Self-Motivated