

**Ajith Adhithya Mukkera**

[ajithadhithyamukkera2580@gmail.com](mailto:ajithadhithyamukkera2580@gmail.com)

+91-8317633924

## Objective

A motivated **Mechanical Engineering Graduate** with a strong foundation in **product design and development**. Proficient in CAD software and eager to apply engineering principles to real-world design and manufacturing challenges. Seeking a role in **product design, mechanical systems, or R&D** where I can contribute my skills and grow professionally.

## Education

**Chaitanya Deemed to be University**

**Btech- Mechanical Engineering**

Graduation Year: 2023

## Technical Skills

- **Design Software:** SolidWorks, AutoCAD, CATIA, Fusion 360
- **Simulation & Analysis:** ANSYS, Hypermesh
- **Manufacturing Knowledge:** CNC Machining, Injection Molding
- **Programming:** Python, MATLAB (Basic knowledge)
- **Other:** GD&T, Engineering Drawings, BOM Creation, DFMEA

## Certifications

- Master Certificate Course in CAD CAM – **Central Institute of Tool Design**
- Certification Course in CNC Turning- **Central Institute of Tool Design**

## Projects

### 1. Refrigeration Effect Using a Peltier Module

- Developed a refrigeration system utilizing a Peltier module to demonstrate **thermoelectric cooling technology**.
- Focused on achieving **efficient temperature control** in small-scale applications without using traditional refrigerants.
- Designed and tested the system to **optimize heat dissipation and cooling performance**.

### 2. Quick Return Mechanism

- Designed and implemented a **Quick Return Mechanism** to improve efficiency in reciprocating motion for machine tools.
- Focused on **reducing cycle time** by achieving a faster return stroke while maintaining controlled forward cutting motion.
- Conducted performance tests to **optimize motion and minimize wear** in the mechanism.

### 3. Cantilever Beam Analysis using ANSYS

- Performed **structural analysis** of a cantilever beam using **ANSYS** to assess stress distribution, deformation, and deflection under various loading conditions.
- Simulated real-world scenarios to evaluate **beam performance** and ensure safety and stability in engineering applications.
- Applied **finite element analysis (FEA)** principles to validate theoretical calculations with computational results.

## Internship

### Central Institute of Tool Design

DEC 2019- JUNE 2020

- Gained hands-on experience in **CNC turning operations** and machining techniques.
- Operated and programmed **CNC lathe machines** for precision manufacturing.

- Assisted in **tool selection, speed/feed optimization, and quality inspection.**
- Understood **G-code programming** and troubleshooting for machining processes.

## **Additional Information**

- **Soft Skills:** Problem-Solving, Teamwork, Attention to Detail, Time Management
- **Languages:** English, Telugu, Hindi
- **Hobbies & Interests:** Automotive Design, Robotics.