DINESH POLAVARAPU

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Profile Summary

Motivated **B.Tech Mechanical Engineering** student at **IIT Tirupati** with strong expertise in **CAD/CAE tools, data structures, and applied machine learning**. Experienced in innovation-driven projects across **AI-powered healthcare, smart wearables, and sustainable manufacturing**. Passionate about building scalable, real-world engineering solutions.

Education

Indian Institute of Technology (IIT) Tirupati
B.Tech in Mechanical Engineering
Expected Graduation: 2028

Technical Skills

Engineering & Design

- AutoCAD
- Fusion 360
- ANSYS SpaceClaim
- ANSYS Motion
- ANSYS Fluent

Programming & Computer Science

- Python, C Programming
- Data Structures & Algorithms
- Applied Machine Learning

Soft Skills

- Problem Solving
- Teamwork
- Leadership
- Analytical Thinking

Certifications

- Data Structures & Algorithms – IIT Kharagpur
- Applied Machine Learning – IISc Bangalore
- Data Structures & Algorithms – StrategicERP

Projects & Achievements

LifeLine AI – Intelligent Healthcare Assistant

- Built an AI system for disease prediction using symptom analysis and image-based diagnosis.
- Evaluated future health risks based on lifestyle habits and medical history.
- Designed a personal health coach for diet, sleep, and exercise planning.
- Integrated real-time emergency guidance and doctor recommendations.

Guardian – Smart Wearable System
Winner – Nation Builder Competition

- Proposed AI-enabled wearable for real-time health monitoring and prediction.
- Enabled offline functionality for rural and low-internet regions.
- Automated emergency response: ambulance calls, relative alerts, live location sharing.
- Designed a companion app for health data storage and medicine delivery.

Sustainable Manufacturing from Waste Materials

- Converted waste plastics, tires, and aluminum into usable manufacturing materials.
- Proposed recycled 3D printer filament and sheet production.
- Focused on circular economy and sustainable engineering.

Interests

AI in Mechanical Engineering • Product Innovation • Startups • Sustainable Design