

# AMOGH A PAI

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## Education

### Indian Institute of Technology Dharwad

Aug 2023 – Present

*B.Tech in Mechanical Engineering — CGPA: 8.00/10.00*

*Dharwad, India*

- **Relevant Coursework:** C, Data Structures and Algorithms, Calculus, Linear Algebra, Probability, Numerical Algebra, Computational Fluid Dynamics (CFD)

### Rashtrottana Vidya Kendra

2021 – 2023

*Senior Secondary (Class XII, CBSE) – 90.8%*

*Bangalore, India*

## Experience

### Machine Learning Intern

Jun 2025 – Jul 2025

*Elevate Labs (Remote)*

- Developed an integrated **Multimodal Health and Safety Monitoring System** combining **Face Mask Detection (YOLOv8)** and **Speech Emotion Recognition (MFCC, SVM, Random Forest)** for workplace safety applications.

### Research and Development Project

Aug 2025 – Present

*Indian Institute of Technology Dharwad*

*Advisor: Prof. Sudheer Siddapureddy*

- Working on an **AI/ML-based Breast Cancer Detection** project using infrared thermography images.
- Designing preprocessing techniques for thermal images and applying CNN-based architectures to identify abnormal patterns.

## Projects

### Heart Disease Detection using ML (Scikit-learn, Pandas)

2025

- Built a prediction model on UCI dataset with preprocessing, feature engineering, and EDA.
- Achieved up to **90% accuracy** using Logistic Regression and Random Forest.
- Implemented cross-validation and hyperparameter tuning to improve model generalization.

### Robotic Arm Design and Assembly (SolidWorks)

2024

- Designed a robotic arm model in SolidWorks, including multiple joints and end-effector.
- Created complete part assemblies with constraints and motion study for realistic simulation.

## Achievements

### Volleyball Team Member – 56th Inter IIT Sports Meet

2023

- Represented IIT Dharwad at IIT Bombay in the 56th Inter IIT Sports Meet.

## Certifications

### Complete AI & ML, Data Science Bootcamp

Udemy (Jul 2025)

### Supervised Machine Learning: Regression & Classification

Coursera (Dec 2024)

## Extracurricular Activities

### Volleyball Secretary

Aug 2025 – Present

*Indian Institute of Technology Dharwad*

- Organized tournaments, training sessions, and institute-level events.
- Led team practices, mentored juniors, and coordinated campus-wide participation.

## Technical Skills

**Programming Languages:** Python, C, C++

**Libraries/Frameworks:** NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, TensorFlow, PyTorch, YOLOv8, OpenCV, Librosa

**Developer Tools:** Git, VS Code, Jupyter Notebook, Google Colab, AWS

**Software:** MATLAB, SolidWorks

**Soft Skills:** Problem Solving, Analytical Thinking, Team Leadership, Collaboration, Communication