


Ananya Kedlaya

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EXPERIENCE

CMTI (Central Manufacturing Technology Institute)

November 2023 - Present

Project Associate

- **FullStack Web Application** for remote monitoring and maintenance of 6 machines with **real-time data**, providing a 50% reduction of excess labor in the manufacturing sector for machine parameters check.
- **Desktop Application with ML model** for real-time weld defect detection and reduce post weld quality check
- **Documented responsive webpages** and applied coding practices after **requirement analysis**.
- **Wireframe** and **prototype** with **Figma**. Applied **UI** principles. Making **User Map Journey** and **Technical Flows**
- **Managing a team of 2 interns**. Structured a **System Design and Architecture** to be followed.

PROJECTS

1. Remote machine health monitoring and maintenance system

- Analysed a system design to use **Websockets** for real-time data, Frontend **Vue.js**, **state management** with **Vue Router** and **Pinia store** and Backend **Python FastAPI** to create **RESTful APIs**. **SQL** Queries.
- Database migration from **MongoDB** into **PostgreSQL**, data population scheduled with **APScheduler**.
- Used **Figma** to design a **user flow** and dashboard design, **light UI** and a focus on **User Experience (UX)**

2. AI enabled automatic Weld Defect Detection System

- **YOLO** model created from scratch to build **Windows OS Desktop Interface** developed for a Thermal Camera using its **SDK** with **Python PyQt**. Applied **multithreaded programming** and **MVP architecture**.
- Created and **annotated dataset** on **Roboflow**. **Thermal Image processing**, data augmentation.

Personal Projects

1. National Level AR/VR/XR hackathon by Wavelaps, BharatXR, XDG Mumbai- <https://learnify-ce846.web.app/>

- Developed website with **React.js** and user authentication and hosting with **Firebase** along with **User Flow Mapping** for a **AR** based gamified learning experience enhancing education of high-school students

2. Handwritten numbers classification using TensorFlow - [GitHub Repository](#)

- Used **TensorFlow** to build a **Convolution Neural Network (CNN)** to classify images of handwritten number

3. Text to 3D mesh model using FreeNeRF - [GitHub Repository](#)

- Render a 3D mesh model from textual input that can be imported onto other engines
- Pretrained diffusion model for generating images and FreeNeRF to generate 3D views from sparse input

EDUCATION

Acharya Institute of Technology - 7.82 cgpa

August 2019- June 2023

Bachelor of Engineering - Computer Science and Engineering

SKILLS

- Frontend Development - HTML/CSS, Tailwind CSS, Javascript, React.js, Vue.js, JQuery
- Backend Development - Python FastAPI framework- CORS, JWT, SQLAlchemy, SQL
- Database - PostgreSQL, MongoDB
- Machine Learning - YOLO, CNN
- Image Processing- OpenCV, PIL
- Tools - Docker, Github, Git, Figma, WIX
- Python GUI from SDK with PyQt
- Apache HTTP Server - Reverse Proxy

ACHIEVEMENTS

- Secured 1st place in Final Year Project Presentation in the Computer Science and Engineering Department
- Headed the Literary Club in college. Conducted debates and poetry sessions.
- Volunteered in Government School Beautification Projects to uplift the learning spaces of rural schools