

PIYUSH VARMA

Portfolio — pytworks@gmail.com — [LinkedIn](#) — [GitHub](#)

Education

Manipal University Jaipur

B.Tech in Computer Science and Engineering - AIML — CGPA: 8.7/10

Expected May 2027

Jaipur, India

Dawale Junior College

12th Higher Secondary Education — Score: 84.17%

2021 – 2023

Maharashtra, India

Late Parmanand Malani School

10th Secondary Education — Score: 96.4%

2008 – 2021

Maharashtra, India

Projects

MUJ-AIML Automated Seating Arrangement System | [Live Demo](#) | [GitHub](#)

Next.js 15, TypeScript, Tailwind CSS, PostHog, Vercel, Python

- Built and deployed an exam seating portal for MUJ AIML students, reducing seat lookup time from **approximately 3 minutes** of manual PDF searching to **under 2 seconds**.
- Processed and indexed **2,182+ exam-seat records** generated from university seating plans covering **548 students** across multiple examinations.
- Implemented a **custom seat-mapping algorithm** to convert PDF-based seating data into interactive room visualizations.
- Supported **450+ students** during end-term examinations and recorded **2,934+ page views** during the examination window.

AI-Powered Road Damage & Pothole Detection System | [Live Demo](#) | [GitHub](#)

Python, YOLOv8, OpenCV, Folium, Pandas, Google Colab, Google Maps API

- Built a **real-time road damage detection system** using YOLOv8 and OpenCV to detect potholes, cracks, and other road defects from images and dashcam footage.
- Processed and unified **10GB+** of multi-source training data by resolving label inconsistencies through custom Python pipelines.
- Trained a YOLOv8m model using Google Maps-derived test data and augmentation techniques, achieving **82% detection accuracy**.
- Developed an **interactive GIS dashboard** with Folium to visualize road conditions using severity-based mapping.

AutoSub – AI-Powered Video Subtitle Generator | [Live Demo](#) | [GitHub](#)

Next.js, TypeScript, OpenAI Whisper API, Vercel Blob, Tailwind CSS

- Built an AI-powered subtitle generator using OpenAI Whisper for **mixed-language Hinglish transcription**.
- Developed a **real-time subtitle editor** with synchronized playback, transcript editing, and SRT export support.
- Implemented scalable video processing and prompt-engineering techniques to improve subtitle quality for Hindi-English content.

Technical Skills

Languages: Python, JavaScript, TypeScript, C++, SQL

Generative AI & ML: Prompt Engineering, LLM Integration (OpenAI API), YOLOv8, Scikit-learn, Pandas

Frontend & Backend: React.js, Next.js, Node.js, Express.js, HTML5, CSS3

Databases & Cloud: MongoDB, PostgreSQL, SQL, AWS

Tools & Methodologies: Git, GitHub, Docker, Postman, Linux, Agile workflows

Problem Solving: Solved 250+ DSA Problems (LeetCode, Codeforces, HackerRank)

Leadership & Achievements

- Qualified **GSSoC 2026**, **GSSoC 2025** and **Hacktoberfest 2025**, contributing to open-source projects with merged pull requests across multiple repositories.