

# Aaryan Palve

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## Work Experience

### Datamorphosis Technologies Ltd

*Data Science Intern (April 2025-Ongoing)*

- **Delivered 4 end-to-end Proofs of Concept, developing 8+ OpenCV models** for real-time video surveillance and analytics.
- Delivered 4 end-to-end PoCs, developing 8+ OpenCV models for real-time video analytics—including **bus surveillance, PPE detection, robot hazard prevention, and jewellery shop surveillance**. Engineered backend services to process real-time video input and integrate analysis reports with an admin dashboard
- Designed 4 dashboard to visualize insights, user activities, and system performance metrics (such as employee efficiency rates)
- Conducted rigorous model evaluation and performance tuning to ensure high accuracy and low latency in production environments.

Tech Stack: Flask, React, Open CV

### Smartcard AI

*AIML Intern (Nov 2024 - Jan 2025)*

- Optimized CSV processing, reducing token consumption by 30%, leading to substantial cost savings.
- Developed an end-to-end CSV-to-visualization pipeline, enabling seamless data transformation and insightful graphical representation.
- Built an API to efficiently convert CSV data into a SQL database, streamlining data storage, retrieval, and processing.
- Engineered server-side logic using Gemini 1.5 Flash Conversational AI, enhancing AI-driven interactions and visualization workflows.
- Designed and deployed Flask-based APIs, conducted model testing, and performed performance benchmarking to maximize efficiency.

Tech Stack: Flask, Gemini 1.5 Flash Conversational AI, API Development, Postman

## Projects

### SAP Stock AI-powered stock analysis platform with real-time insights

*(Sep 2024 - Nov 2024)*

- Built a Next.js-based stock analysis system integrating sentiment analysis for informed investment decisions.
- Designed interactive dashboards after creating a data pipeline to fetch, clean, and store stock data using **yfinance API**, using the yfinance API, allowing dynamic stock performance tracking.
- Developed a text classification model leveraging the Google News API to automate sentiment categorization of financial news.
- Integrated a RAG-based AI chatbot with a Flask backend, enabling traders to query and analyze real-time market news and **blockchain-based news report system** to ensure data integrity, storing only verified and clean news sources for reliable insights.
- Automated daily stock insights email updates, keeping investors informed on market trends.

Tech Stack: Next.js, Flask, yfinance API, Google News API, NLP, AI Chatbot

### Documentor AI (AI-powered document analysis and chat platform)

*(May 2025)*

- Developed a system to ingest and summarize documents (PDF, Word, text, images).
- Implemented vector search (FAISS/ChromaDB) and a memory-aware RAG chatbot using SentenceTransformers and Gemini.
- Built an agentic planner for decomposing complex queries and orchestrating multi-step document retrieval and reasoning.
- **Tech Stack:** Python, FastAPI, LangChain, FAISS/ChromaDB, SentenceTransformers, PyMuPDF, pytesseract

### Agrimate AI-driven precision agriculture platform enhancing farming efficiency

*(Feb 2024 - Apr 2024)*

- Developed & deployed data ingestion pipelines to soil analysis models (NPK, humidity) to generate data-driven crop recommendations.
- Integrated an image recognition system for early detection of rice diseases, reducing crop losses through timely intervention alongside chatbot and news updates.
- Built a digital marketplace connecting farmers with verified suppliers, optimizing the agricultural supply chain and reducing procurement costs.
- Piloted the solution in Mirjewadi village, benefitting 100+ farmers and gaining regional press coverage in Sakal newspaper.

Tech Stack: Flask, Scikit-learn, HTML, JavaScript, Bootstrap CSS

## Achievements

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- **1st Rank** - *IndoVate AI Sprint Hackathon(Fintech Domain)* held at MKSSS's Cummins College of Engineering For Women. Solution:-SAP Stocks projects
- **1st Rank** - *Internal Smart India Hackathon (Software Category)*  
Solution:- Developed AtjBot, a Retrieval-Augmented Generation (RAG) chatbot for the Department of Justice India website, enabling intelligent querying over legal documents using advanced AI technologies like LangChain, ChromaDB, and Google Generative AI embeddings.
- **4th Rank** - *VU Visionary Techfest Hackathon (AIML Domain)*

## Volunteering & Leadership

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### Guest Speaker & Project Lead, Agricultural Innovation

- Presented AI-driven farming solutions to 100+ farmers at Mirjewadi village via DY Patil ABM College, featured in Sakal Newspaper.
- Led field testing and gathered implementation feedback through direct farmer engagement.

### Admiral, Competitive Programming Community (120+ Members)

- Organized 24 hour national hackathon,coding workshops, contests, and mentorship programs to foster technical growth.
- Conducted coding contests ,group discussions,community meetups ,post discussions and mentor -mentee sessions
- Spearheaded guest speaker sessions to enhance peer learning and community engagement.

## Freelance Work Experience

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### Brothers Guitar

*Freelance Web Developer( July 2024 - Aug 2024)*

- Individually completed development life cycle of [brothersguitars.in](https://brothersguitars.in), collaborating closely with stakeholders to deliver a website that aligned with brand identity and business objectives , resulting in 15% customer inquiries boost.
- Implemented comprehensive service listings and course catalogs, optimizing for conversion rates through strategic content placement and SEO-friendly architecture.

Tech Stack: Web Development, Client Relations Management, React Js

## Technical Skills

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- **Programming Languages:** Python, JavaScript, C++
- **API Development:** Flask, Postman
- **Data Analytics & Visualization:** Power BI, Tableau, Excel
- **Databases:** SQL, MySQL, SQLite
- **Web Development:** React.js, Node.js, Express.js, Bootstrap, Tailwind CSS
- **Version Control:** Git, GitHub