

Sampreet Patil

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SUMMARY

Final-year Computer Science student specializing in the development of AI-native applications and agentic systems. Passionate about building reusable, domain-specific software IP using GenAI, Python, and cloud-native technologies to solve complex problems.

EDUCATION

Visvesvaraya Technological University, Belagavi, Karnataka

Expected Graduation, May 2026

Bachelor of Technology in Computer Science and Business Systems

CGPA: 8.6

PROJECTS

Agent-X An Agentic Personal Assistant | [GitHub](#)

June 2025 - Present

Role: Founding Engineer & AI Architect

- Built a RAG-based agentic system automating 100+ daily workflows with 85% accuracy.
- Engineered a GenAI platform delivering personalized insights from 8+ news sources with 95% relevance.
- Deployed a scalable, AI-native microservices app, achieving 99.5% uptime.
- Tech Stack:** Flutter, Python (FastAPI), Gemini LLM, RAG, ChromaDB, Firebase, Docker.

Pandas Assistant for Natural Data-Analytics | [GitHub](#)

July 2025 – September 2025

Role: Full-Stack AI Engineer & Solution Architect

- Cut data analysis time by 40% by translating natural language queries into actionable insights.
- Designed a modular AI architecture with a pluggable registry for real-time interactive visualizations.
- Achieved 95% query accuracy in the full-stack solution through robust, automated column mapping.
- Tech Stack:** Python (FastAPI, Pandas), React.js, OpenRouter API, WebSockets, Chart.js.

Crowd Detection with YOLOv5 and SORT | [GitHub](#) | [CV Expo Publication](#)

Sep 2024 – Dec 2024

Role: Solo Developer & Computer Vision Engineer

- Achieved 90%+ detection accuracy in real-time video analysis using intelligent frame sampling.
- Engineered a multi-threaded tracking system with dynamic ROI for real-time density analytics.
- Developed a production-ready solution with automated alerts and a responsive GUI for standard hardware.
- Tech Stack:** Python, PyTorch, OpenCV, YOLOv5, SORT Algorithm, Tkinter.

SKILLS

Programming: Python, Java, Dart, C++, Rust, JavaScript, SQL, Go (Familiar)

AI & Machine Learning: PyTorch, TensorFlow, LangChain, GenAI (RAG, Fine-Tuning), Pandas, NumPy, Scikit-Learn

Frameworks & Web: FastAPI, Flask, Flutter, React, Node.js

Tools & Platforms: Docker, Git, AWS, LLM APIs (Gemini, OpenAI), Vector DBs (ChromaDB), Firebase, Jupyter Notebooks

Enterprise Software: Product Lifecycle Management (PLM), Siemens Teamcenter

ACHIEVEMENTS AND ACTIVITIES

Codequest # 22 – National Coding Challenge (Naukri Campus)

July 2025 – August 2025

6th Place | Solo Competition

- Ranked 6th nationally among 30,000 participants in a coding challenge focused on real world algorithmic problem solving.

CV Expo 2024 – Computer Vision Projects Showcase (Ready Tensor Inc.)

Dec 2024 – Feb 2025

Featured Project | [Publication](#)

- Invited to present a solo-developed real-time crowd detection system using YOLOv5 and SORT at a global showcase of CV innovations.
- Invitation extended by Ready Tensor Inc. after review of GitHub project; recognized for practical application of computer vision and tracking systems.