# MANDAR SURYAVANSHI

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## Education

**Bachelor of Technology (B.Tech) – Computer Science / Data Science** 2025 – 2029
*Ajeenkya DY Patil University, Pune* *Pune, India*
CGPA: 8.68/10.0
Relevant Coursework: Data Structures and Algorithms, Machine Learning, System Design, OOP, Database Management Systems

## Experience

**Coding Blocks School Of Technology** Jun 2026-Present
*AI, ML & Data Science Intern*

- Working on real-world AI/ML and Data Science projects under industry mentorship during a 6-week intensive program.
- Gaining hands-on exposure to model building, data pipelines, agile workflows, and collaborative software development.

## Projects

**AI Multi-Agent Operating System** | *Python, FastAPI, LangChain/LangGraph, Redis, Vector DB, Docker, React* GitHub

- Designed a **multi-agent AI system** where specialized agents collaboratively perform complex tasks — planning, research, memory retrieval, and response generation.
- Implemented agent orchestration, **long-term memory**, and tool-calling pipelines using modern LLM frameworks for scalable, context-aware task execution.

**Distributed AI Interview Simulator** | *Python, FastAPI, WebSockets, React, PostgreSQL, Whisper AI, Docker* GitHub

- Built an AI-powered interview simulation platform with real-time voice/text interaction, adaptive questioning, and performance evaluation targeting **Google-style SWE interviews**.
- Designed scalable backend services with asynchronous processing and analytics-based feedback generation, reducing evaluation latency by **40%**.

**AI Memory Engine & Personal Knowledge OS** | *Python, Vector DBs, RAG, FastAPI, PostgreSQL, Redis* GitHub

- Developed an AI memory engine for semantic search, long-term context retention, and personalized knowledge retrieval using vector embeddings.
- Implemented retrieval-augmented generation **(RAG) pipelines** achieving context-aware response accuracy improvements, enabling scalable personal knowledge management.

**Intelligent Airport Operations & Digital Twin Platform** | *Python, Streamlit, SQLite, Pandas, NumPy, Plotly, Scikit-learn* GitHub

- Built an enterprise-style airport management system that simulates **end-to-end airport operations** — from passenger check-in and baggage handling to aircraft takeoff and landing — integrating AI-based scheduling, predictive analytics, and **real-time monitoring**.
- Engineered a **digital twin architecture** with live data pipelines and **anomaly detection** to optimize runway utilization and reduce average ground delay by **35% in simulation**.
- Designed **modular microservices** for flight scheduling, gate assignment, and predictive maintenance using FastAPI and **Redis pub/sub, with a React-based real-time control dashboard**.

## Technical Skills`

**Programming Languages:** Python, C++, Java, JavaScript (ES6+), SQL, Go (Golang),Rust
**Backend & APIs:** FastAPI, REST API, WebSockets, Node.js, React, HTML/CSS
**AI / ML:** LangChain, LangGraph, RAG Pipelines, Vector Databases, Whisper AI, Embeddings APIs
**DevOps & Tools:** Docker, Git, GitHub, PostgreSQL, Redis, MongoDB, Postman
**Core Concepts:** Data Structures & Algorithms, System Design, OOP, Distributed Systems, Microservices

## Certifications & Achievements

- Contributer :- GirlScript Summer of Code 2026: Contributed to AI/ML open source repositories, merging production-level PRs.
- Contributer :- Nexus Spring of Code 2026: Contributed to distributed systems and backend tooling projects.

## Soft Skills

- Project Management
- Team Management
- Problem Solving