

Karman Singh

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EDUCATION

VIT Chennai

B.Tech CSE (AI and Robotics)

Chennai, Tamil Nadu, India

Present

IIT Madras

B.Sc in Data Science

Chennai, Tamil Nadu, India

Present

TECHNICAL SKILLS

Programming Languages: Python, C++, C, Java, JavaScript, Go, Rust, Terraform, TypeScript

Libraries and Tools: PyTorch, Sklearn, Pandas, NumPy, OpenCV, Git, Docker, Next.js, React.js, SQL, Supabase, Firebase

ML Architectures: CNN, YOLO, Transformers (BERT, LSTM), RAFT, RAG

WORK EXPERIENCE

FLSmidth - Intern

Remote

February 2026 - March 2026

- Engineered a computer vision pipeline to denoise industrial mill scans and classify mill types using geometric feature matching.
- Reduced measurement error from 150% to 10% across 9 industrial parameters, increasing scan reliability by over 6x.

PROJECTS

- **News** — Tech Stack: React Expo, Supabase, News API [GitHub](#)
 - Aggregates news articles from right, left, and centrist media sources to help users form balanced and informed opinions.
 - Trained and evaluated 3 summarization models to capture ideological bias across political news sources.
 - Designed an interface allowing users to compare narratives and perspectives across multiple media outlets.
- **Bot Arena** — Tech Stack: Python, LLM APIs, Simulation Systems [GitHub](#)
 - Engineered a multi-agent trading simulation with 5 autonomous AI agents representing distinct financial strategies and risk profiles.
 - Orchestrated an LLM-driven scenario generator producing dynamic economic and geopolitical events for market stress testing.
 - Analyzed long-term profitability and behavioral divergence of agents across hundreds of simulated trading cycles.
- **Desktop Assistant** — Tech Stack: Python, System APIs [GitHub](#)
 - Engineered a command-driven desktop assistant enabling rapid file and folder retrieval across local directories.
 - Integrated quick-search commands for Google, StackOverflow, YouTube, and Gemini to streamline information access.
 - Reduced file navigation time through command-based search and integrated web query shortcuts.
- **Explainer AI** — Tech Stack: JavaScript, Browser Extension APIs, LLM APIs [GitHub](#)
 - Engineered a browser extension that generates contextual summaries of LLM responses directly within webpages.
 - Enables users to store and organize explanations without opening additional chat sessions.
 - Reduces context switching by consolidating explanations and insights in a single interface.

ACHIEVEMENTS

- **IEEE 12-Hour Hackathon** — Project: MoodSync Discord Bot — Tech Stack: Python, Discord API, Audio Processing
 - Secured **2nd Place** in a 12-hour hackathon organized by the IEEE student chapter.
 - Engineered a Discord bot that analyzes real-time voice chat sentiment and dynamically selects music matching the detected mood.
 - Implemented voice activity analysis and automated music selection to enhance engagement in Discord voice channels.