

# Yathharth M Karanjikar

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## Professional Summary

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Building production AI systems taught me where today's models actually break. With 20+ multi-agent systems shipped and 3 published papers (Springer, IEEE), I work at the intersection of applied engineering and foundational research. I build systems that work today while questioning why they fail: static learning, brittle generalization, and the widening gap between pattern recognition and genuine understanding.

## Education

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### Bachelor of Engineering in Artificial Intelligence & Data Science

Thadomal Shahani Engineering College, Mumbai, India

Dec 2021 – May 2025

CGPA: 8.23

## Experience

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### Senior AI Engineer / Forward Deployed Engineer

*TheAgentic.AI*

Feb 2025 – Present

*San Francisco, California*

- Architected autonomous AI agents with context engineering, LLM orchestration, and DOM manipulation for TheAgentic Browser — an open-source multi-agent web automation system achieving 91.2% on the WebVoyager benchmark (OpenAI Operator: 87%).
- Co-architected [CortexON](#), an open-source multi-agent orchestration alternative to Manus, focused on production-grade multi-agent orchestration.
- Contributed to DeepResearch V3, an internal agentic search engine with advanced retrieval and reasoning capabilities.
- Led 4 client projects end-to-end (architecture, development, deployment, client coordination) across grants automation, chemistry, marketing, stock trading, and medical domains using LangChain, LangGraph, and custom agent pipelines.
- Built a Neo4j-based knowledge graph memory system with custom semantic ingestion and retrieval, enabling long-term agent context beyond typical RAG window limitations.
- Developed a document processing pipeline (LDRM) handling 1000+ documents at 95%+ accuracy for financial analysis use cases.
- Tech stack: FastAPI, PostgreSQL, Neo4j, knowledge graphs, agent orchestration, LLM context engineering.

### AI Intern

*TheAgentic.AI*

Dec 2024 – Feb 2025

*San Francisco, California*

- Developed [The Agentic Browser](#), a fully automated web navigation and data scraping system using a three-agent loop with Playwright, handling multimodal inputs and secure credential management.
- Built and integrated a multi-agent framework on PydanticAI to manage and coordinate multiple autonomous agents in production.

### Generative AI Research Intern

*Thadomal Shahani Engineering College*

Jun 2024

*Mumbai, India*

- Researched generative models for marketing applications, contributing to insights and ongoing Generative AI studies.
- Published “Generative AI in Marketing” at the 5th International Conference on Sustainability, Leadership, and Technology (Welingkar Institute, July 2024).

## Research & Publications

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### DeepCAS: A Novel GAN Architecture for High-Fidelity Satellite Image Generation

H. Deshpande, A. Gurav, **Y. Karanjikar**, N. Mandal (2025). *Springer Nature — International Journal of Information Technology*, pp. 1–11. [\[Link\]](#)

- Proposed DeepCAS (Deep Conditional Attentional Smoothing), a generative network using self-attention, conditional generation, and label smoothing for high-fidelity satellite image synthesis. Evaluated on EuroSAT with improved performance over existing methods.

### Comparing Effectiveness of GAN-Based Methods for Enhancing EuroSAT Classification

A. Gurav, **Y. Karanjikar**, O. Bhikle, H. Deshpande (2024). *IEEE ICESC 2024*, pp. 1611–1616. Cited by 4. [\[Link\]](#)

- Investigated four GAN variants (InfoGAN, CGAN, CDCGAN, ACGAN) to augment EuroSAT by 50%, training CNNs for satellite image classification. CDCGAN achieved the highest classification accuracy; ACGAN excelled in precision and recall.

### Generative AI in Marketing: Content Creation and Beyond

G. Patyane, D. Merchant, A. Gurav, S. Ansari, **Y. Karanjikar**, H. Deshpande, G.T. Thampi (2024). *Welingkar 5th*

*Intl. Conf. on Sustainability, Leadership & Technology*, p. 175. [\[Link\]](#)

- Explored how generative AI can build Global Capability Centres within enterprises, examining the impact of LLMs and Vision Language Models on marketing and content creation workflows.

## Technical Skills

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

**Agent Systems:** Multi-agent orchestration (20+ production systems), custom tool-use implementations, hierarchical agent memory systems, custom evaluation frameworks, production RAG pipelines

**Infrastructure & Cloud:** AWS, GCP, Docker, Kubernetes, CI/CD (GitHub Actions)

**Frameworks & Tools:** PydanticAI, LangChain, AutoGen, FastAPI, React, Next.js, Transformers, Weights & Biases, Pydantic Logfire

**Data Systems:** PostgreSQL, MongoDB, Redis, Neo4j (knowledge graphs), Vector databases

**Other:** Data Structures & Algorithms, Machine Learning, Deep Learning, Data Analysis & Visualization, Pandas, Git