

Durgesh Khade

+91 95290 82243 | durgeshkhade001@gmail.com | github.com/BrewedAlgorithms

EDUCATION

Pune Institute of Computer Technology

Bachelor of Engineering, IT Engineering – CGPA: 9.33/10.0

Vidyalankar Polytechnic

Diploma in Computer Engineering – Percentage: 94.57% (Rank: Top 0.7% Statewide)

Year of Completion: 2027

Year of Completion: 2024

RESEARCH

Stanford University | Letter of Recommendation

Aug 2025 – Dec 2025

- Architected an AI-based research platform enabling faculty to organize and query research literature via natural language, replacing manual metadata entry and document search.
- Built an automated metadata extraction pipeline that eliminated manual data entry, adopted as the standard literature-review workflow for the research group.
- Built a RAG-based conversational search system over a multi-million-paper research corpus, enabling faculty to query and retrieve relevant literature in natural language within seconds.
- Designed a semantic deduplication engine using embedding-based clustering and LLM verification, processing 33M+ news records and removing 7M+ duplicates, streamlining data for downstream ML training.

WORK EXPERIENCE

Product Development Intern

Jan 2026 – Jun 2026

BMC Helix | Certificate | (Among Top Performer & PPO)

Pune, Maharashtra

- Engineered a multi-stage Docker containerization pipeline for an On-Prem REST API connector, reducing image size by 86% (835MB to 113MB) and resolving cross-platform binary compatibility issues.
- Designed and implemented Server-Sent Events (SSE) protocol across three microservices, replacing polling architecture with real-time event streaming and Redis-backed request queuing.
- Identified and fixed a critical race condition in Redis queue consumption, eliminating duplicate request delivery across multi-container deployments.
- Authored and drove adoption of a multi-container orchestration design, including container naming, profile management, and CLI tooling, integrated into setup scripts.

Data Science Intern

Jun 2025 – Nov 2025

AlgoAnalytics | Certificate

Pune, Maharashtra

- Optimized the data extraction pipeline by migrating to a Docling-based architecture, improving efficiency, scalability, and downstream model performance.
- Designed and executed comprehensive testing and validation strategies, improving reliability and enabling seamless integration of the new ML pipeline with existing systems.
- Implemented Docker-based deployment and automation pipelines, ensuring reproducible and production-ready delivery of ML solutions.

Software Engineering Intern

Jun 2023 – Apr 2024

TASL (Indian Navy Project CTS-71) | Certificate

Mumbai, Maharashtra

- Developed a high-performance C++ Packet Analyzer to decode and monitor real-time UDP data streams from naval equipment, enhancing diagnostic capabilities and data processing efficiency by over 30%.
- Engineered the Node.js backend powering the training system, shipping 200+ REST APIs spanning weapons-state simulation, trainee session management, telemetry and 10+ WebSocket channels for real-time multi-user simulation.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS

AI/ML & Data: RAG Pipelines, LLM Integration, Embeddings & Vector Search, Semantic Clustering, Docling

Frameworks: React, Node.js, Flask, FastAPI

Infrastructure: Docker, Redis, NGINX, Server-Sent Events (SSE), WebSockets

Developer Tools: Git, Postman, VS Code, PyCharm, IntelliJ

ACHIEVEMENTS

- Built **CTS-71** from the ground up – a mission-critical training system for the **Indian Navy**, strengthening national defense readiness and mission preparedness, and slated for deployment aboard aircraft carrier **INS Vikrant**.
- #1 Winner, **COEP Software Hackathon**, **HackSprint Software Hackathon**, and **JSPM National Project Competition** (2025).
- Round 2 Finalist, **Adobe India Hackathon 2025** – advanced among **2.5 lakh** participants.
- Special Mention, **Mastercard-supported Hackathon** – ranked among the **Top 5** across all PS (2025).