Devang Borkar

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Education

- M.S in Computer Science from University of California Davis — Status-Ongoing
- B.E. in Computer Science from Pune University — Status - Graduated

Work History

Senior AI Engineer at *PilotCrew AI* — October 2025 - Present

- Architected an autonomous evaluation engine that recursively generates adversarial synthetic prompts to expose agentic failure modes and hallucination patterns
- Built a self-correcting optimization loop that iteratively refines agent instructions based on error traces, boosting pass rates and ensuring deterministic behavior in production

SWE Intern at *LearnHaus AI* — June 2025 - August 2025

- Developed a multimodal analysis service from 0-to-1 using Python with async processing that orchestrated video/audio analysis speech-to-text transcription, and multi-provider integration to deliver automated coaching.
- Designed a distributed consensus protocol among LLM judges to automate ground-truth generation ensuring evaluation reliability without manual labeling and deployed the platform to GCP.

Founding Engineer at *HammerTrade (Stealth Startup)* — October 2024 to June 2025

- Developed a high-throughput, distributed data processing service in Python to manage ML workloads for high-frequency trading simulations, ensuring performance & scalability.
- Engineered a complex market simulation environment to train autonomous reinforcement learning (RL) agents, modeling extreme volatility with over 10 configurable parameters.

Software Engineer at *Hexaview Technologies* — August 2022 to September 2024

- Shipped 20+ features for a Fortune 500 wealth management platform, developing a scalable backend using ASP.NET Core with AWS Lambda-based microservice architecture.
- Optimized a legacy C# backend servicing over 1 million monthly requests, applying key design patterns to reduce code complexity & successfully redesigning 50+ REST APIs.

Projects

CausalFlow – Autonomous Agent Debugging Framework

- Built an interpretable agentic framework achieving 40% performance uplift over baseline to resolve failures in multi-step reasoning chains for long horizon complex tasks
- Engineered deterministic synthetic environments to ground agent execution in verifiable state transitions, eliminating hallucination risks associated with LLM-based world modeling

Process Reward Model (PRM) for On-Device LLMs

- Architected a composite inference system coupling a lightweight generator (Qwen3-0.6B) with a heavy verifier (Qwen3-8B), enabling efficient “weak-to-strong” generalization for resource-constrained environments
- Optimized Python implementations of Search strategies to dynamically traverse and score reasoning chains in real-time

AI CodeMentor – LLM-Powered Code Analysis & Review Automation

- Developed an LLM-powered agent for automated CI/CD code reviews, using agentic tool calling (OpenAI APIs) and Node.js to analyze PRs and issues.
- Engineered the agent to parse git diffs via the GitHub API and invoke external analysis functions, providing intelligent, context-aware feedback on code changes.

LLM Self-Chat - Agentic AI Simulation Framework

- Built an agentic framework using Python and LangChain, enabling multi-agent LLM simulations for behavior analysis and prompt engineering.
- Integrated WebSockets to establish a real-time, low-latency communication channel between the React front-end and Flask backend for interactive agent simulation.

ResChat – Decentralized Platform with AI Assistant

- Built a low latency communication platform using C++ and Python leveraging distributed storage systems for real-time messaging and large file transfers
- Implemented a RAG-based AI chatbot using LangChain for document parsing across distributed databases and reducing information retrieval time by 85%.
- Developed a pipeline to generate high-quality embeddings and index documents in a FAISS vector database, optimizing for accurate embedding-based retrieval.

Gitartha Engine – Semantic Search for the Bhagavad Gita

- Architected a full-stack application using Go (Gin) for the high-concurrency REST API and FastAPI for ML model inference, achieving consistent P95 search latency of under 15ms.
- Developed low latency semantic search using PostgreSQL with the pgvector extension, resulting in an average query response time of 12.7ms across a corpus of 700+ verses.

Daily Digest – AI-Powered Gmail/Calendar Summarizer

- Built an AI assistant reducing the daily planning overhead by 70% using Flask and Python powered by Gemini AI via secure OAuth 2.0, providing personalized priority-based summaries and Text-To-Speech capabilities.