

Ajitha Prasad Y

NIT Trichy | [GitHub](#) | [LinkedIn](#) | [Portfolio](#)

SUMMARY

Software Engineer with 3+ years building and shipping production AI systems and **scalable full stack platforms**: a customer-facing conversational **AI agent**, a **multi-agent** natural-language-to-**DSL** system, an analytics platform aggregating 6 advertising **APIs** and \$2B+ ad spend, and an **ACID**-compliant payments backend that processed Rs. 18L+ at peak concurrency. Strong across **C#/.NET Core, Python, Go, TypeScript, React, GraphQL, REST APIs, MongoDB** and **AWS**, with a focus on making **LLM**-driven and data-heavy systems fast, reliable and cost-efficient in production.

EXPERIENCE

Software Engineer, Optmyzr

Jun 2023 - Present

Sidekick, Production Conversational AI Agent for PPC Marketing

- Built a production **conversational AI agent** that automates campaign insights and optimization via **tool calling** and multi-step **agentic workflows** across 10+ internal services, shipped as a flagship customer-facing product surface.
- Engineered an **LLM router** using **function calling** to dispatch queries across 10 specialized tools with ambiguity resolution, built the secure **tool-access harness**, and designed the **eval suite** that cut tool mis-invocations.
- Cut end-to-end latency from ~3 minutes to under 90 seconds by merging redundant **LLM** calls and pruning unnecessary **vector store** lookups; added **guardrails** and **structured output** enforcement to curb **hallucinations**.
- Tech stack: **C#, .NET, OpenAI, LLMs, embeddings, vector databases, prompt engineering, eval design, MongoDB**

AI Rule Builder, Natural Language to DSL Automation System

- Built a **multi-agent system** turning plain-English requests into executable **Domain Specific Language** programs for the company Rule Engine: it scopes the request, returns an editable plan for user review, then compiles it to **DSL**.
- Designed a **retrieval** harness on **Pinecone embeddings** plus a deterministic compile-and-repair loop feeding compiler errors back to the agent in an agent-readable format for **self-correction**.
- Improved accuracy from 35% to 82% and cut latency from 200s+ to 45-60s by collapsing a 3-agent pipeline to 2 and refining **prompts**; tracked quality per release with an **evaluation harness** using **LLM-as-a-judge** scoring.
- Tech stack: **C#, .NET, OpenAI, Pinecone, RAG, multi-agent orchestration, evaluation harness**

Portfolio Management Platform (\$2B+ Ad Spend)

- Architected a platform aggregating live data from 6 advertising **APIs** (**Google Ads, Microsoft Ads, Amazon DSP, Facebook Ads, LinkedIn, Yahoo Gemini**) across 1,000+ portfolios and 3,000+ accounts; a primary revenue driver from Q4 2024 to Q2 2025.
- Built a **GraphQL API** layer and **React** dashboard over a hybrid **MongoDB + DuckDB** architecture, keeping analytical queries interactive across 1M+ data points, plus an automated **data pipeline** for multi-platform ingestion and normalization.
- Shipped a **RAG** support bot over a 10,000+ document knowledge base and resolved production bugs across 20+ tools while meeting company **SLAs**.
- Tech stack: **C#, .NET Core, JavaScript (ES6+), React, GraphQL, REST APIs, MongoDB, DuckDB, MySQL, Redis, AWS, S3, Docker**

PROJECTS

D-Pay, UPI-Style Festival Payment System

Mar 2023

- Built a mobile payment app for NIT Trichy fests with a thread-safe **concurrent** transaction engine, **ACID**-compliant workflows preventing **race conditions** and a **Go load testing** framework; processed Rs. 18,00,000+ over 3 days with zero incidents.
- Tech stack: **Python, FastAPI, Go, PostgreSQL, React, TypeScript, PWA, Docker**

Utopia, Real-Time Virtual Campus

Dec 2021

- Built a low-latency **WebSocket** service in **Go** using **goroutines** and **Redis** to share live location for 100+ concurrent users, and integrated the **Phaser** engine with **React** via a custom **React Reconciler**.
- Tech stack: **Go, Redis, WebSockets, React, Phaser, Tailwind CSS, Docker**

Interactive Planner (MCP plugin), Agent Observability and ClaudeMonitor

2026

- Built a **Claude Code** plugin exposing an **MCP server** plus a local **HTTP + SSE** review UI for inline comments on agent plans, built an blazingly fast agent observability tool with **flame graphs** to analyze agent traces, and a **Python** tray app polling the **Anthropic API**.
- Tech stacks: **Node.js, TypeScript, MCP SDK, Python**

SKILLS

Languages: **C#, Python, TypeScript, JavaScript (ES6+), Go, Kotlin, SQL, HTML/CSS**

AI / LLM: agent orchestration, tool calling, multi-agent systems, RAG, prompt engineering, eval design, LLM-as-a-judge, guardrails, MCP, OpenAI, Anthropic Claude, Pinecone, embeddings

Backend & Frontend: **.NET Core, Node.js, REST APIs, GraphQL, microservices, WebSockets, concurrency, system design, React,**

Data & Infra: **MongoDB, PostgreSQL, MySQL, DuckDB, Redis, AWS, S3, Docker, CI/CD, Git, Agile/Scrum**

EDUCATION, LEADERSHIP & AWARDS

B.Tech, National Institute of Technology (NIT) Trichy

2019 - 2023

- Head of Web Ops**, Pragyan (2022 - 2023): led a 60-member team for an ISO 20121-certified tech fest (40,000+ visitors). **Full Stack Developer**, Delta Force (2020 - 2023): built internal platforms used by 10,000+ students.
- Winner**: IIT Madras Shastra Web Crawler Hackathon 2022, Tri-NIT Hackathon 2022 (2,000+ participants), Optmyzr internal hackathon.