Abhijith Prakash

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Summary

Product Engineer with hands-on experience in **DevOps** (Jenkins CI/CD, AWS CloudFormation, Infrastructure as Code), **cloud engineering** on AWS and Oracle Cloud, and **full-stack development** (Node.js, Python, React, WebRTC). Built and shipped a production Chrome extension end to end, including real-time sync, WebSocket signaling, and self-managed cloud deployment. Experience integrating **LLM-based AI agents** with persistent memory via Model Context Protocol (MCP).

Experience

Tata Consultancy Services (TCS) **Jan 2026 – Present**
Product Engineer – TCS ADD Safety (Pharmacovigilance Platform) *New Delhi, India*

- Built and maintained **Jenkins CI/CD pipelines** with **Groovy** scripting to automate build, test, and deployment workflows on **AWS**.
- Authored **AWS CloudFormation** templates in **YAML** to provision infrastructure as code (**IaC**), enabling consistent, repeatable environments across dev, test, and production.
- Implemented persistent **core memory** for an enterprise **AI agent** using **MCP (Model Context Protocol)**, retaining context across sessions and improving multi-turn response coherence.
- Drove **AWS cost optimization** by auditing **EC2, S3, and Lambda** utilization and decommissioning over-provisioned infrastructure, reducing monthly cloud spend.
- Wrote **Python** automation scripts for pipeline utilities and data processing supporting adverse event case intake workflows.

Slonke **Jun 2025 – Present**
Founder & Lead Developer – Chrome Extension for Watch Parties (slonke.com) *Remote*

- Designed, built, and shipped a **Manifest V3 Chrome extension** (live on the Chrome Web Store) enabling two-person watch parties with **WebRTC** voice and video across **5+ streaming platforms** (YouTube, Netflix, Prime Video, Disney+ Hotstar, Vimeo) via a shared base-adapter pattern.
- Engineered a real-time **playback sync engine** using a last-action-wins protocol over a monotonic revision counter with passive drift correction, keeping viewers frame-accurate across play, pause, seek, and rate changes.
- Developed a **Node.js WebSocket signaling server** handling **10+ real-time message types** (room management, sync, chat, WebRTC negotiation, presence) fully in memory; integrated self-hosted **coturn** with a managed **TURN** fallback using short-lived credentials.

Projects

PolicyBot – AI Insurance Chatbot | *Python, FastAPI, Google Gemini, JavaScript* **Apr 2025**

- Developed a full-stack **LLM-powered chatbot** using **Google Gemini 1.5 Flash** for natural language insurance policy queries; built a **FastAPI** backend with PyPDF2-based knowledge base extraction and context-aware, multi-turn **conversation history** via RESTful APIs.

Harmonica – Text Summarizer Chrome Extension | *JavaScript, Flask, BERT NLP* **Jul 2024 – Nov 2024**

- Built a **Chrome extension** using **BERT-based NLP** for in-browser text summarization, achieving **97.6% summarization accuracy** and growing daily active users by **20%**.

SilenceSense – Voice Activity Detection | *React.js, Python, Flask, WebRTC* **Aug 2024 – Sep 2024**

- Engineered a real-time **Voice Activity Detection** system with **WebRTC** audio capture and a Python/Flask **REST API** backend, reliably handling variable noise environments.

Technical Skills

Cloud & DevOps: AWS (EC2, S3, Lambda, CloudFormation), Oracle Cloud, Jenkins, CI/CD, Infrastructure as Code (IaC), Groovy, YAML, Linux, nginx, systemd, Podman (Docker-compatible containers), Git, GitHub
AI & Machine Learning: LLM Integration, AI Agents, MCP (Model Context Protocol), Prompt Engineering, TensorFlow, OpenCV, Pandas, NumPy
Languages: Python, JavaScript, Java, SQL
Web & Backend: Node.js, React.js, FastAPI, Flask, Django, REST APIs, WebRTC, WebSockets, HTML5, CSS3
Databases: PostgreSQL, MySQL, SQLite

Education

Amrita Vishwa Vidyapeetham **Sep 2021 – May 2025**
B.Tech, Computer Science and Engineering *Chennai, India*

Certifications & Leadership

Certifications: JavaScript Algorithms and Data Structures (freeCodeCamp, Apr 2023); Python 5-Star Gold Badge (HackerRank, Apr 2023)
Leadership: Mentor, Cognizance Student Technology Club, Amrita Vishwa Vidyapeetham (Sep 2022 – Oct 2024) – mentored **20+ students** in machine learning and web development; delivered technical workshops and co-organized campus hackathons