Darshan Potnis

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Summary

Software Engineer specializing in **backend** and **distributed systems**, with proven experience **shipping production APIs** and **real-time pipelines** on **AWS**, delivering measurable **latency** and **reliability improvements** at **scale**.

Education

- **University of Southern California**, Los Angeles, CA — Jan 2024 – Dec 2025
  M.S. in **Applied Data Science**
- **BSE Institute**, Mumbai, India — Jun 2022 – Jul 2023
  Post Graduate Diploma in **Predictive Analytics**
- **S.I.E.S College of Arts, Science and Commerce**, Mumbai, India — Aug 2019 – Jun 2022
  B.Sc. in **Computer Science**

Experience

99 Yards — Remote
Software Engineer Intern — *Jun 2025 – Aug 2025*

- Designed and shipped **scalable REST APIs** using **FastAPI**, **PostgreSQL**, and **Docker** on **AWS Fargate**, supporting **thousands of concurrent requests** with clean, modular OOP architecture.
- Built a **Redis Streams–based real-time event pipeline**, reducing **API latency by 45%** and enabling reliable synchronization across distributed services under peak load.
- Implemented CI/CD pipelines with **GitHub Actions** and **Terraform**, cutting deployment time by **60%** and enabling safe **blue-green production releases**.

Scienox Technologies — Mumbai, India
Backend Engineering Intern — *Oct 2022 – Apr 2023*

- Developed **real-time data ingestion services** using **Flask** and **PostgreSQL** on **AWS EC2**, processing high-frequency financial data with strict latency requirements.
- Optimized **SQL queries** and introduced **Redis caching**, improving **API response times by 40%** and reducing database load during peak traffic.
- Improved system reliability by implementing **structured logging**, **health checks**, and monitoring, contributing to **99.9% service uptime**.

Skills

- **Languages:** Python, JavaScript, Java, C++, SQL
- **Backend & Frameworks:** FastAPI, Flask, Node.js, Express, Django
- **Cloud & DevOps:** AWS (EC2, S3, Lambda, Fargate), GCP, Docker, Terraform, GitHub Actions, CI/CD
- **Databases:** PostgreSQL, MongoDB, MySQL, Redis, Firebase
- **Core CS:** Data Structures & Algorithms, **Object-Oriented Programming (OOP)**, Multithreading, Time & Space Complexity
- **Engineering Concepts:** REST APIs, Microservices, Distributed Systems, System Design
- **Testing:** PyTest, JUnit, Selenium, Unit & Integration Testing

Projects

- **Cloud File Storage Platform** [Node.js, React, AWS S3, PostgreSQL, Docker, CI/CD]
  - Built a **secure, scalable object storage system** with **resumable uploads**, **role-based access control**, and multi-user file management, designed for production-scale workloads.
  - Optimized backend architecture using **S3 pre-signed URLs** and **stateless REST APIs**, **reducing server load by 70%** and improving upload throughput.
- **Real-Time Collaborative Code Editor** [React, Node.js, WebSockets, Socket.IO, Monaco Editor]
  - Developed a **real-time collaborative editor** supporting **concurrent multi-user editing** with **sub-200ms synchronization latency**.
  - Engineered robust **WebSocket state reconciliation** and **event-ordering mechanisms** to ensure **consistent shared state** under high concurrency.
- **API Rate Limiter & Gateway** [FastAPI, Redis, Python, REST APIs, JavaScript, HTML/CSS]
  - Designed a **production-grade API gateway** implementing **Redis-backed rate limiting**, **API key authentication**, and **HTTP 429 enforcement** to protect backend services from abuse.
  - Built an **interactive monitoring dashboard** with **tier-based access simulation** and **live rate-limit reset countdowns** using backend timestamps and client-side timers.

Certifications & Achievements

- **AWS Cloud Practitioner**, **Google Cloud Digital Leader**, **Python (HackerRank)**
- **Winner – FinTech Hackathon:** Built a production-ready anomaly detection microservice, **cutting false positives by 18%**.