Nihar Patel

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Education

San Jose State University | *Master of Science in Computer Software Engineering* **Aug 2025 – May 2027**

Coursework: Software Systems Engineering, Cloud Services, Virtualization Technologies, Enterprise Software Platforms

Nirma University | *Bachelor of Technology in Computer Science and Engineering* **Oct 2020 – Jun 2024**

Coursework: Data Structures and Algorithms, Object-Oriented Programming, OS, DBMS, Machine Learning

Technical Skills

Languages: C++, Java, Go (Golang), Python, SQL, JavaScript, TypeScript
Backend: Spring Boot, FastAPI, REST, GraphQL, gRPC, WebSockets, Kafka, Redis, PostgreSQL, MongoDB
Frontend: React.js, Next.js, Redux, HTML/CSS, Android Studio, React Native
Cloud & DevOps: AWS, GCP, Docker, Kubernetes, Terraform, Jenkins, GitHub Actions, CI/CD, Prometheus, Grafana
ML: PyTorch, Scikit-learn, HuggingFace, RAG Pipelines

Experience

GreatBear | *Software Engineer* Ahmedabad, India | **Jul 2024 – Jun 2025**

- Architected a distributed **Java** microservices backend for an investment platform using **GraphQL** APIs, supporting **1,000+ daily active sessions** across portfolio and fund analytics workflows
- Built a multithreaded **C++** stock price forecasting service running **1,000,000+** Monte Carlo iterations per run, consuming jobs via **Cloud Pub/Sub** and persisting forecasts to **MySQL** for portfolio and risk analytics
- Migrated **15+** legacy cron-based workloads from dedicated servers to serverless **Go** Cloud Functions triggered by **GCP Cloud Scheduler**, reducing monthly infrastructure costs by **$2,400**
- Developed a responsive **React/TypeScript** dashboard with interactive **Chart.js** visualizations and real-time data tables
- Automated **10+ GCP services** (Cloud Storage, Cloud Pub/Sub, Cloud Monitoring, etc.) via **Terraform** and delivered containerized services with **Docker**, **Kubernetes (GKE)**, and **CI/CD** pipelines, cutting deployment time by 60%
- Collaborated cross-functionally to author **design docs** and ship **reliable distributed services**, owning **unit and integration testing**, **production monitoring**, and **on-call debugging** to sustain **high service uptime**

GreatBear | *Software Engineer Intern* Ahmedabad, India | **Jan 2024 – Jun 2024**

- Built a scalable **Go** order-execution microservice using **Redis** queues and goroutines (10 workers), cutting latency by 80%
- Architected **Java** multi-role access control with **JWT** authentication middleware, securing 220+ API endpoints
- Developed **Go** data pipeline syncing 10,000+ mutual fund NAV records daily from AMFI, eliminating manual entry
- Developed **Java Spring Boot REST APIs** and **WebSockets** powering a real-time portfolio dashboard

Flourish Creations | *Software Engineer Intern* Ahmedabad, India | **May 2023 – Jul 2023**

- Built **C++** data pipeline consuming 50K+ events/sec from **Kafka**, profiled and resolved **10+ production bugs**
- Implemented **Prometheus + Grafana** monitoring for CPU/memory bottlenecks, reducing incident detection by **70%**
- Optimized **C++** batch jobs with multithreading and memory pooling, debugging leaks for **3x throughput** gain

Projects

Real-Time News Analysis and Alert Platform | *Python, Go, Next.js, Kafka, Redis, PostgreSQL, Docker, AWS* **Demo**

- Built **Python** LLM enrichment pipeline with semantic deduplication and **dynamic topic clustering** using **pgvector**, reducing LLM API calls by **60%** while processing **10K+ daily articles**
- Developed **Go** notification microservice with **Redis** caching and **topic-based clustering**, matching user preferences and reducing duplicate alerts by **70%** with **sub-2-minute** latency
- Designed **event-driven microservices** architecture with **Kafka** stream processing, **PostgreSQL**, and **Next.js** frontend, containerized with **Docker** and deployed on **AWS ECS**

Distributed Job Orchestration Platform | *Java, Go, gRPC, Etcd, Prometheus, Terraform*

- Built fault-tolerant **Java** control plane with **Etcd** consensus and consistent hashing, scheduling 10,000+ jobs across dynamic nodes and maintaining availability during network partitions
- Implemented **Go** worker agents using Linux **cgroups** to isolate resources and run containers securely in production
- Shipped **Prometheus** metrics and **Grafana** dashboards for real-time health, utilization, and alerting globally at scale

Achievements

- Ranked **1st** in the Open Innovation track at MINED Hackathon by Nirma University and Binghamton University
- Won **6** coding contests and organized **5+** coding events at **Nirma University**, competing against **500+** students