Darshit Joshi

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Summary

Software Engineer committed to delivering high-quality projects and exceeding expectations. Proven ability to optimize processes, automate tasks, and deliver secure, efficient, and user-focused solutions that drive business success.

Skills

- **Development:** Python, JavaScript, GoLang, FastAPI, Django, SQLAlchemy, MySQL, PostgreSQL, RabbitMQ, Redis, Celery, WebSockets, React

- **Networking:** TCP/IP, HTTP, Packet processing, Network virtualization, Software-defined networking (SDN)

- **DevOps & Monitoring:** Jenkins, ArgoCD, Grafana, LogQL, CI/CD pipelines, System observability

- **AI and Data Analysis:** Generative AI, Stable Diffusion, PyTorch, CUDA, VAEs, LLM fine-tuning, Regression algorithms, LangChain, LangGraph, VectorDB

- **AWS:** EC2, S3, ECS Fargate, Bedrock, Sagemaker, lambda, SQS, AWS connect, AWS transcribe, CloudWatch

Work Experience

Armakuni
AI ENGINEER
Remote
Mar. 2025 - Present

- **Smart Call Assistant:** Developed AI-powered call assistant integrating **ElevenLabs TTS**, **AWS Transcribe STT**, **Amazon Bedrock LLM**, and **OpenSearch** for knowledge base. Implemented features for Google Calendar booking, availability lookup, and real estate broker website building.
- **Medical RAG SMS Chatbot:** Built medical domain RAG chatbot using **Twilio** with comprehensive issue escalation, tracking, and follow-up capabilities for healthcare communication.
- **Gaming Character Generation:** Created text-to-image and image-to-image generation system for consistent character creation in gaming industry using **SageMaker**, **ComfyUI**, and **Qwen image edit models**.

DosePack (Meditab)
SOFTWARE ENGINEER
Ahmedabad
Dec. 2022 - Present

- **API Development:** Designed and implemented RESTful APIs to streamline business workflows, reduce response times by 50%, and enhance system interoperability.
- **Migration Automation:** Automated database migration processes, reducing deployment time by 40% with version control across environments. Created and published PyPi library for the same.
- **Data Engineering and Analytics:** Built ETL pipelines for **data pre-processing, feature engineering and validation** to support analytics. created daily performance statics for stakeholders
- **Real-time Systems:** Developed real-time solutions using **WebSockets**, enabling bi-directional communication for features like **live updates**, **dynamic dashboards**, and **notification services**.
- **Authentication Systems:** Designed and implemented secure authentication systems using token-based mechanisms **(JWT)** and role-based access control **(RBAC)**. Developed a seamless single sign-on **(SSO)** solution with **OAuth2.0 scopes**.
- **Database Engineering:** Enhanced backend performance by designing a well-optimized SQL database, significantly improving storage utilization and system efficiency.
- **Algorithm Optimization:** Optimized computationally intensive algorithms for **pack-filling slot customizations** and workflow optimizations.

Projects

- **High-Performance Packet Processor:** Built a multi-threaded packet processing engine in C++ using DPDK for high-speed network traffic analysis. Implemented TCP/UDP packet parsing, flow classification, and basic firewall rules with zero-copy packet handling achieving 10Gbps throughput.

- **Software-Defined Network Controller:** Developed an SDN controller in GoLang that manages virtual network topologies and routing policies. Implemented OpenFlow protocol support for dynamic flow table management and network virtualization with REST APIs for network configuration.

- **Stable Diffusion:** Developed a project using Stable Diffusion models to generate images. Gained hands-on experience in generative AI concepts, including LORAs, VAEs, CUDA and checkpoints, enhancing my understanding of image generation workflows and model fine-tuning. This project deepened my knowledge generative AI techniques.

- **Consistent Character Generator:** Text-to-image and image-to-image system for consistent character creation using SageMaker, ComfyUI, and Qwen models. used LoRAs and quantized models to reduce processing time

- **Distributed Load Balancer:** Created a fault-tolerant load balancer using C++ and Python with health checking, session persistence, and automatic failover. Implemented consistent hashing for traffic distribution across multiple backend servers with real-time metrics collection.

- **Medical RAG SMS Chatbot:** Healthcare chatbot using Twilio with issue escalation, tracking, and follow-up capabilities.

- **Network Monitoring Dashboard:** Built a real-time network monitoring system using Python and WebSockets that tracks bandwidth utilization, packet loss, and latency metrics. Integrated with Grafana for visualization and alerting on network anomalies.

- **Smart Call Assistant:** AI-powered call system with ElevenLabs TTS, AWS Transcribe STT, Bedrock LLM, and OpenSearch. Features Google Calendar booking and real estate tools.

- **AI Movie Recommendation:** movie recommendation using opensource GenAI APIs.

Education

Dharmsinh Desai University   *Nadiad, Gujarat*
B.Tech   *July. 2019 - May. 2023*
  CGPA: 8.72/10