

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

- **Systems Programming:** Python, GoLang, JavaScript, Linux, Distributed systems
- **Networking:** TCP/IP, HTTP, Packet processing, Network virtualization, Software-defined networking (SDN)
- **Development & Infrastructure:** FastAPI, Django, SQLAlchemy, WebSockets, Terraform, Docker, Kubernetes, MySQL, PostgreSQL
- **DevOps & Monitoring:** Jenkins, ArgoCD, Grafana, LogQL, CI/CD pipelines, System observability

Work Experience

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.
- **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.
- **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.

Education

Dharmsinh Desai University

B.TECH

CGPA: 8.72/10

Nadiad, Gujarat

July. 2019 - May. 2023