SANDEEP GUPTA

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SUMMARY

Backend Software Engineer with 4 years of experience designing resilient APIs and automating large-scale workflows. Delivered high-availability services processing 1M+ jobs, improving uptime, reducing operational overhead, and accelerating engineering delivery. Skilled at translating complex challenges into scalable, business-ready solutions.

SKILLS

Languages/Frameworks: Python (Django, Flask), Java, HTML/CSS, SQL
Cloud and Infrastructure: AWS, Docker, GitLab (CI/CD), Liquibase, Terraform, Linux, Shell Scripting
Databases: PostgreSQL, MySQL, MongoDB, Redis
System Design and Scalability: RESTful APIs, Concurrency and Fault Tolerance, Monitoring and Logging, Data Pipelines

EXPERIENCE

Software Engineer | Intel Corporation Sep 2022 – Nov 2024

Focus: Concurrency control, monitoring and automation, engineering efficiency, database optimization

- Ensured uninterrupted plan execution by reducing reset failures 10% by using resource-specific file locking, eliminating race conditions, manual overhead, and **data integrity risks**.
- Accelerated incident detection time from 2 hours to 30 minutes by developing a Python-based **monitoring tool** with SQL integration and cron scheduling, **enhancing SLA adherence**.
- Improved **developer productivity** and saved ~50 engineering hours/month by converting the deletion workflow into an executable CLI, bypassing reset error encountered via the interface.
- Trimmed runtime crashes by 20%, replacing exit calls with exception handling and traces, increasing reliability.
- Standardized Liquibase tagging and migration naming conventions, enabling **safer rollbacks** across environments.
- Revised **Redis integration** by replacing deprecated methods for Redis 4.x compliance, mitigating version failures.
- Enhanced database performance by optimizing queries, views, and schemas, reducing execution time by 15%.

Systems Analyst | Arizona State University Jan 2021 – Jul 2022

Focus: Process automation, cloud migration, system resiliency

- Automated resource allocation using Python/MySQL, improving reliability and reducing processing time by 30%.
- Migrated employee data pipelines to **AWS infrastructure**, using RDS, S3, and Lambda, reducing overhead.
- Boosted resiliency of the employee portal by configuring inconsistent HTML/CSS scripts, reducing crashes by 18%.

Software Engineer | RNG Group of Institutions Jul 2019 – Dec 2020

Focus: Application development, database optimization, scalable data infrastructure

- Architected a high-throughput **data pipeline** for large-scale traffic, improving availability and resiliency by 30%.
- Designed RESTful API to connect **React frontend** and **Django backend**, enhancing access for 10,000+ users.
- Normalized schemas and optimized MySQL queries to improve performance and reduce extraction time by 40%.

PROJECT

Chat with Docs: Retrieval-Augmented Generation Platform Aug 2025 – Present

Focus: Application development, scalable data infrastructure, database optimization

- Designing AI-powered document search with live PDFs chat, enabling cited queries, supporting 1M+ tokens.
- Building a **RAG pipeline** and deploying on cloud with a **Docker FastAPI backend** and PostgreSQL/**pgvector**.

EDUCATION

Master of Science (Information Technology) | Arizona State University, Tempe, AZ Jan 2021 – Aug 2022

Bachelor of Technology (Information Technology) | Uttar Pradesh Technical University, India Sep 2015 – Jul 2019