

Sohil Khan

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[Github](#) [Website](#) [LinkedIn](#)

Backend-focused Software Engineer with 2+ years of experience designing distributed systems, data migration pipelines, and secure integrations, delivering high-impact solutions at scale in cloud-native environments.

EXPERIENCE

Alphasense

Software Engineer 2

New Delhi, IND

Jun 2022 – Nov 2024

• Migration System:

- Engineered a scalable migration framework on **AWS EC2** with **Python** and **MongoDB**, enabling Sales team to independently manage client migrations through a Retool UI without developer intervention.
- Automated the migration of **100M+ rows**, reducing the timeline by 6 months by streamlining customer feedback loops to function without developer involvement.
- Reduced unnecessary transfers by **30%**, accelerated customer adoption, and ensured uninterrupted operations while migrating **1,300+ customer** accounts, driving **\$400K ARR** growth.

• Integrations:

- Worked on development of connectors to enable synchronization of client content from third-party vendors like Box.
- Optimized Python workers to scale ingestion rate by introducing batching and parallel processing.
- Architected a microservices-based system with **FastAPI** APIs (**Uvicorn**) and Python workers (**AWS SQS**, **MySQL** metadata), delivering reliable synchronization with less than 1% failure rate.
- Implemented observability with **OpenTelemetry** + **GrafanaTempo**, improving monitoring, troubleshooting, and uptime consistency.

• Jupyterhub:

- Deployed a secure JupyterHub environment on Docker Swarm with **RBAC** and Retool-based user provisioning, providing **30** developers across 3 teams controlled backend access.
- Reduced customer query turnaround from **3–4 days to 2–5 hours**, significantly improving customer satisfaction and reducing support backlog.
- Increased developer efficiency by **70%** and boosted customer support productivity by **80%** by enabling shared, reusable notebooks for recurring requests.

• Secure Token Migration:

- Migrated all third-party client tokens to an **AES-256** encrypted framework with **Vault** integration, reducing exposure risk by **90%**, achieving **ISO 27001** compliance, and delivering the project end-to-end as a solo contributor.
- Refactored integration code across connectors to support encrypted tokens with zero downtime, ensuring business continuity for all clients.
- Directly contributed to onboarding major enterprise clients by addressing strict security requirements, earning recognition from leadership for securing high-value deals.

PROGRAMMING SKILLS

- **Languages:** Python, SQL, JavaScript
- **Tools:** MySQL, MongoDB, Redis, AWS, Docker, Kubernetes, Docker Swarm, Vault, OpenTelemetry, GrafanaTempo
- **Skills:** Distributed Systems, Microservices Architecture, API Development, Data Synchronization
- **Course Work:** Database Management System, Operating Systems, Computer Networking

EDUCATION

• Birla Institute of Technology and Science

B.E Engineering in Electrical and Electronics

Pilani, India

Aug 2017 – July 2022

• Birla Institute of Technology and Science

M.Sc Economic

Pilani, India

Aug 2017 – July 2022