

# ANISH KARKI

Database Engineer | PostgreSQL 17 | Azure & AWS Hybrid Cloud |  
Patroni | Terraform

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## PROFESSIONAL SUMMARY

Database Engineer at Kyndryl with 6+ years of experience in SQL Server and deep expertise in PostgreSQL 17. Currently leading database engineering for **enterprise financial platforms processing 50M+ transactions daily** on hybrid **Microsoft Azure and AWS** cloud infrastructure. Specialized in architecting high-availability Patroni clusters, building Infrastructure as Code with Terraform and Ansible, and developing automation using Python/FastAPI and Bash. Completed **advanced PostgreSQL training with PostgreSQL core developers**. Expert in Crunchy Data optimization, MSSQL operations, and achieving 99.995% uptime across high-volume payment systems.

## TECHNICAL SKILLS

**Databases:** PostgreSQL 17, MSSQL, Patroni HA, pgBouncer, WAL-G

**Cloud:** Microsoft Azure, AWS, Hybrid Cloud Architecture

**IaC & Automation:** Terraform, Ansible, Python, FastAPI, Bash

**Monitoring:** Grafana, OpenSearch, Prometheus, postgres\_exporter

**Optimization:** Crunchy Data, pg\_stat\_statements, Query Tuning

**Compliance:** PCI-DSS, HIPAA, Financial Systems Security

## PROFESSIONAL EXPERIENCE

### Database Engineer

Oct 2024 – Present

Kyndryl, Melbourne (Remote)

Enterprise Financial Platform — 50M+ Daily Transactions | Hybrid Azure & AWS

- Lead database engineering for **high-volume financial platform** processing 50M+ transactions daily on hybrid **Azure + AWS**
- Architect **Patroni** HA clusters with **PostgreSQL 17** — automated failover in <30s, achieving 99.995% uptime
- Build full IaC pipeline using **Terraform** for infrastructure provisioning and **Ansible** for configuration management
- Manage operational **MSSQL** databases supporting real-time payment processing
- Optimize database performance using **Crunchy Data** tooling, pg\_stat\_statements, and advanced query analysis
- Develop automation scripts and REST APIs using **Python**, **FastAPI**, and **Bash**
- Completed intensive **PostgreSQL advanced training** with PostgreSQL core developers

### Data Platform Consultant

Sep 2024 – Present

A&S Technology, Brisbane, QLD

- Design Azure PostgreSQL Flexible Server deployments with private endpoints and geo-redundant backups
- Implement Grafana + Loki monitoring stack for real-time query performance insights

- ▶ Build automated data validation pipelines with Python + Great Expectations — HIPAA-compliant healthcare analytics

### Senior Database Administrator

Jun 2020 – Jun 2023

*Cotiviti Technology*

- ▶ Managed 9PB PostgreSQL analytics platform — Patroni HA clusters, WAL-G backups, pgBouncer connection pooling
- ▶ Built custom monitoring with sql\_exporter feeding Prometheus — alerting on replication lag, bloat, vacuum status
- ▶ Optimized 1000+ queries using BRIN/GIN indexes, declarative partitioning, CTEs — 70% faster analytical workloads
- ▶ Zero security incidents across 3 years: row-level security, pgAudit, automated credential rotation

### Database Administrator

Jun 2018 – Jun 2020

*Cotiviti Technology*

- ▶ Automated maintenance with Python + cron: VACUUM ANALYZE, REINDEX CONCURRENTLY, bloat monitoring
- ▶ Deployed logical replication for zero-downtime reporting — decoupled OLTP from analytical workloads
- ▶ Led 50+ TB SQL Server → PostgreSQL migration with pg\_dump/pg\_restore, validated row counts and checksums

## EDUCATION

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### Master of Information & Communication Technology

2023 – Jun 2025

University of Sunshine Coast, QLD, Australia — Specializing in Data Analytics & Database Systems

### Bachelor of Science in Computer Science

2016 – Sep 2018

Kathmandu University, Nepal — DBMS, Machine Learning, AI, Software Engineering

### Advanced PostgreSQL Developer Training

2025

Intensive week-long seminar with PostgreSQL Core Developers — PostgreSQL 17 Internals & Performance

## CERTIFICATIONS

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Microsoft Azure Database Administrator (DP-300)	2025	Azure Data Fundamentals (DP-900)	2024
Security & Compliance Fundamentals (SC-900)	2023	Power Platform Fundamentals (PL-900)	2024
Python Fundamentals (PearsonVue)	2024		

## KEY PROJECTS

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**Centralized Backup System:** Enterprise solution automating backups across 200+ databases

**Database Size Predictor:** LSTM neural network predicting storage for 330+ databases

**Oracle → Vertica Pipeline:** ETL pipeline transferring 2TB+ daily via PySpark & Kafka

**Migration Validator:** Python framework with 95% faster validation for 50+ databases