

Ayaan Retiwala

India | Remote

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Platform Engineer

Go engineer who built the core of a public cloud from scratch: compute and virtualization over QEMU/KVM, SPDK and NVMe-oF block storage, managed Kubernetes, networking, identity, and the shared libraries the services run on. The hard part of platform work is almost never the happy path, and that is the half I am good at.

EXPERIENCE

Excloud, Platform Engineer Remote

Jun 2023 to Aug 2026

Public cloud with **4,000+ accounts**, **380 active VMs**, and **140 running managed Postgres clusters** at handover; built and operated the core platform alongside the engineering lead and handled production escalations directly.

- Designed and built the block storage engine on SPDK and NVMe-oF, with a reconciler that converges database intent against live bdev, lvol, and RAID state so a crash mid-provision recovers instead of orphaning volumes. Added retryable provisioning, UUID recovery, and online resize.
- Implemented the VFIO-user data path from SPDK-backed RAID devices into QEMU guests, with per-VM NQNs and sockets, idempotent attach and detach, namespace cleanup, and readiness checks before a guest sees the disk.
- Built the Go compute control plane over QEMU/KVM: VM lifecycle APIs, rescue boot, volume attach and reap, subnet operations, serial logs, bare-metal host setup, and reconciliation after failed transitions.
- Shipped managed Kubernetes end to end: control-plane and worker bootstrap, OIDC and JWKS endpoints, short-lived join credentials, Cilium and CoreDNS, a CSI driver with attach, mount, resize, and failover, and the Karpenter cloud provider that autoscales nodes.
- Wrote the shared Go layer the services are built on: an HTTP framework that derives OpenAPI 3.1 from Go types by reflection, a typed error taxonomy, the cross-service domain types, and OpenTelemetry middleware, imported across **20+ internal services**.
- Traced a borrowed-header lifetime bug through the HTTP/2 and HPACK layer of the Kubernetes API transport and fixed it without losing OpenTelemetry trace propagation.
- Built authoritative DNS with AXFR, TSIG, and weighted records, and an AF_PACKET ARP and NDP proxy with BPF filtering, VLAN handling, rate limits, GARP, and IPv6 DAD.
- Orchestrated managed Postgres and Kafka/Streams on the compute and DNS control planes: node lifecycle, replicas, broker provisioning, topics, users, ACLs, and termination cleanup.
- Built the API-to-client pipeline from OpenAPI 3.1 across eight services, feeding the exc Go SDK and CLI plus a generated Terraform provider with **30 resources** and **13 data sources**.

Consumer Sketch, Web Development Intern Vadodara, India

Jan 2022 to Apr 2022

- Built React and Next.js applications on MongoDB with REST and GraphQL APIs, deployed on AWS and Vercel.

PROJECTS

DBConsole, a Postgres workbench for web and macOS Electron, Vite, Next.js, PostgreSQL 19 releases

- Connection management, SQL safety checks before destructive statements run, server-side result streaming, schema graphs, and encrypted named-query sync with conflict resolution.

CBManager, a native macOS clipboard manager Swift, AppKit, SQLite, Vision v1.0.1

- Menu-bar app with global shortcut and paste-back, OCR over copied images, fuzzy and semantic search, SQLite WAL writes, **162 test methods**, CI, and DMG packaging.

EDUCATION

Sardar Vallabhbhai Patel Institute of Technology B.E., Computer Engineering 2018 to 2022

Full-time GATE (Graduate Aptitude Test in Engineering) preparation 2022 to 2023

SKILLS

LANGUAGES	Go, C, TypeScript, Python
INFRASTRUCTURE	Kubernetes, QEMU/KVM, SPDK, NVMe-oF, VFIO-user, Firecracker, Linux, systemd
DATA	PostgreSQL, SQLite, Valkey, ClickHouse, Kafka/KRaft, OpenTelemetry
DEVELOPER PLATFORM	OpenAPI 3.1, Terraform Plugin Framework, GitHub Actions
NETWORKING	DNS, AXFR, TSIG, ARP/NDP, IPv4/IPv6, HTTP/2, TLS