VEDANT KARLE

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Backend-leaning software engineer with 3 years building the identity and access layer of a multi-product SaaS platform: authentication, authorization, centralized login and the customer data platform around them.

PROFESSIONAL EXPERIENCE

Contentstack — Pune, India *Jul 2023 – Present*

Software Engineer I *Jul 2024 – Present*

- Developed a **customer data platform (CDP) application** integrating a third-party data platform into the suite.
  - Saga-based backend orchestrating provisioning across two cloud environments with keyless service auth.
  - Event-driven integration layer (CloudEvents over Kafka) exposing platform data to downstream products.
  - React micro-frontend within the product dashboard, with full observability of requests, errors and logs.
  - Transitioned the full customer base from the legacy integration with **zero downtime**.
- Led the design and delivery of **enterprise role-based access control (RBAC)** across the product suite.
  - Product-specific and customer-defined roles with fine-grained, resource-level permissions.
  - Policy-based authorization (OPA/Rego) enforced via a sidecar, with role versioning and team inheritance.
  - Role-management APIs, SSO role mapping and the administration interface.
- Built **multi-tenant organisation administration and identity unification** for the data platform in Go.
  - Hierarchical entitlement model with organisation-level defaults and account-level overrides.
  - Organisation-admin roles, administration console and cross-organisation account switching.
  - Consolidated duplicate user records into a **single identity per user** through a staged production rollout.
- Building a **centralized login service** on Keycloak, providing single sign-on across all products.
  - OIDC with PKCE, Keycloak Organizations and a custom authenticator SPI.
  - Silent cross-product sign-on, back-channel logout and configuration-driven per-tenant rollout.
  - Migration approach that preserves existing enterprise SSO integrations without customer-side changes.
- Strengthened **platform security** across the authentication and authorization services.
  - Resolved penetration-test findings: a 2FA bypass, cross-tenant token validation and broken access control.
  - Remediated static-analysis vulnerabilities and eliminated leaked credentials from container images.

Associate Software Engineer *Jul 2023 – Jul 2024*

- Built a **platform-wide notification service** from the ground up, consumed by every product in the suite.
  - REST and gRPC APIs on Node.js and MongoDB with product-scoped authorization and rich content.
  - React notification centre with configurable grouping and infinite scroll.
- Built the **unified navigation and product switcher** in the shared design system, adopted across the suite.

Recognition: Above & Beyond Award, 2024

AlmaBetter — Web Development Intern *Jun 2022 – Dec 2022*

- Built the company's learning management platform on React, Node.js, Express and MongoDB.

Inator (now Cricinshots) — Flutter Development Intern *May 2021 – Jul 2021*

- Built mobile components for MIT-WPU's Bhartiya Chhatra Sansad app and connected them to backend APIs.

TECHNICAL SKILLS

- **Languages:** Go, TypeScript, JavaScript, SQL
- **Backend:** Node.js, NestJS, Express, REST, gRPC, Kafka, Microservices, Event-Driven Architecture
- **Databases:** MongoDB, PostgreSQL, Cloud Spanner, Redis, BigQuery
- **Frontend:** React, Next.js, Redux, React Query
- **AI Tooling:** Claude Code, MCP, Agent Skills

EDUCATION

MIT World Peace University, Pune *2023*

Bachelor of Technology in Computer Science and Engineering *CGPA: 9.56/10*