

Mohith Pukale

Principal Software Engineer — Identity & Cloud Infrastructure

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SUMMARY

Software engineer specializing in identity and access infrastructure for large-scale cloud platforms. I design and deliver the authorization services, hardware-backed authentication, and region automation that isolated, sovereign, and dedicated cloud environments depend on — and I lead the cross-team programs that get them into production. Equally comfortable writing the service, designing the network under it, and driving it through architecture and security review.

EXPERIENCE

Principal Software Engineer

August 2019 – Present

Oracle Cloud Infrastructure — Seattle, WA

- Own identity and authorization infrastructure for isolated, sovereign, and dedicated cloud environments, spanning the internal authorization platform, just-in-time access service, and identity provider federation.
- Led design and delivery of the identity and permissions capabilities required for fully automated region bring-up, so new regions bootstrap policy provisioning and directory synchronization with no manual intervention.
- Broke a cyclic dependency between the internal authorization platform and a legacy corporate identity provider, clearing the path to a modern provider with phishing-resistant hardware login in place of one-time passwords; led identification and migration of affected users without loss of access.
- Authored the infrastructure-as-code provider for the authorization service, letting partner teams declare access resources directly instead of filing requests; cut resource-creation time ~50% for our largest partner team and extended the provider with owner groups and membership separation as adoption grew.
- Led automation of credential rotation for a security hardening initiative — bootstrapped the rotator service, added service-principal support across internal and customer-facing environments, and integrated an SSH certificate authority, bringing each rotation to under 5 minutes with minimal manual involvement.
- Built security-key programming and lifecycle tooling for Windows, Oracle Linux, and secure-facility environments, including certificate provisioning for multi-factor workstation login, letting regional teams program and distribute keys for 1,000+ users locally instead of shipping from a single site.
- Cut entities under periodic access review from ~5,000 to ~200 by switching the reviewed entity from resources and groups to users carrying an eligibility attribute, reducing reviewer load without losing coverage.
- Added batching to the directory update pipeline, splitting a bulk change across ~40k accounts into batches of 500 so it landed incrementally instead of blocking on a single long-running thread; refactored a single-purpose directory syncer into a generic multi-domain sync job.
- Led design and delivery of an isolated administrative environment giving internal support engineers scoped, audited access to dedicated cloud distributions, integrating console, plugin, and partner applications, and drove it through architecture and security review boards; bootstrapped the resulting environments and automated their resource creation to remove most manual touch points.
- Delivered disaster recovery and multi-region administrative login with downstream partner teams, keeping dedicated regions reachable during a regional failure; added per-region timeout controls and dynamic adjustment for regions with degraded networks.
- Stood up a Windows Active Directory proof of concept end to end — network, jump hosts, gateway, directory, and group-policy login — then designed the pre-production and production architecture as a reusable deployment blueprint for future customers and regions.
- Mentor engineers through onboarding and their first designs; run brown-bag sessions and author the runbooks for the processes I own; act as technical point of contact for partner teams and program managers.

Graduate Student Researcher

June 2018 – August 2018

University of California, Santa Barbara

- Built a fault-tolerant oblivious data store: cloud storage providing availability and privacy by hiding data access patterns from the storage provider itself.
- Adapted existing fault-tolerant storage systems to incorporate Oblivious RAM, and designed the components concealing access patterns.

Software Developer
Amazon — Seattle, WA

August 2015 — August 2017

- Re-architected the Consumer Knowledge Platform's core service with a new data model and metrics, leading to 25% faster response times.
- Reduced operational load 15% by decomposing a monolithic service into a federated one.
- Implemented automated recovery for big-data analytics workflows, plus failure and delay notification.

Software Developer Intern
Amazon

January 2015 — July 2015

- Improved the Consumer Marketing Analytics portal with interactive graphing, report generation, and pagination.
- Automated aggregation and publishing of customer scores using Apache Pig and AWS workflow services.

Software Developer Intern
Intuit

June 2014 — August 2014

- Built a service that masks sensitive production data for use by QA engineers on QuickBooks Online.
- Reduced request time for that service 20% by moving its backend from MySQL to MongoDB.

SKILLS

Languages	Go, Java, Python, C, Bash, SQL, PowerShell
Identity & Security	OAuth 2.0, SAML, OIDC, LDAP, Active Directory & Group Policy, PKI and certificate management, FIDO U2F, YubiKey, SSH certificate authority, secret rotation, applied cryptography
Cloud & Infra	Oracle Cloud Infrastructure, AWS, infrastructure as code, Terraform-style providers, virtual cloud networks, disaster recovery, CI/CD, Linux, Windows Server
Data & Platforms	Distributed systems, MySQL, MongoDB, Apache Hadoop, Apache Pig, Elasticsearch, Solr, NumPy & SciPy
Practice	System design, architecture and security review, cross-team technical leadership, mentoring, technical writing and runbooks

EDUCATION

University of California, Santa Barbara

September 2017 — June 2019

Master of Science, Computer Science — GPA 3.9 / 4.0

Advanced Topics in Security · Advanced Topics in Cryptography · Cloud Computing · Information Retrieval

PES Institute of Technology

September 2011 — June 2015

Bachelor of Engineering, Information Science & Engineering — GPA 9.25 / 10

Computer & Network Security · Natural Language Processing · Data Mining