

Shobhit Tripathi

Engineering Leader — Platforms, AI Engineering & Research Software

Kathmandu, Nepal · open to remote work · shobhittripathi.com · github.com/chance304 · linkedin.com/in/shobhittripathi304

SUMMARY

Engineering leader who builds rigorous, AI-native platforms end to end. As CTO / IT Director at a geotechnical services company, I designed and run its entire technology stack as its sole engineer: identity and single sign-on, private networking across environments, CI/CD built from zero, production monitoring, and an ERP supporting ISO/IEC 17025 lab compliance, built with AI-assisted engineering as the default practice. Before that, 7+ years at Deloitte (11+ years in total), where I led the team behind a firm-wide inter-firm agreement system, owned the Kubernetes/Helm layer of a 17-microservice platform at 99.9% uptime, and earned Technology Guild Guru. I also build Quantum Foundry, an open-source multi-physics semiconductor simulator.

EXPERIENCE

N.S. Engineering & Geotechnical Services — CTO / IT Director

Nov 2025 – Present · Kathmandu, Nepal

- Designed and deployed a production identity and single sign-on stack (Active Directory, Keycloak, LDAPS federation) with a private WireGuard mesh connecting dev, stage and prod environments.
- Built a durable, queue-backed provisioning service (FastAPI + RQ) so an outage in a downstream service never loses or blocks an HR-facing write.
- Built CI/CD (GitHub Actions) from zero for the whole stack, with secrets rotation and environment-gated production deploys.
- Run production monitoring (Prometheus/Grafana) across the identity and application stack.
- Led development of a Frappe/ERPNext-based LIMS/ERP with a Playwright test suite, ISO/IEC 17025 compliance data migration and an org-wide OKR system.
- Run an AI-assisted engineering workflow (agentic tooling) as the default way the stack is built and maintained.

Deloitte India — Senior Analyst / Technology Guild Guru

Jun 2018 – Aug 2025 · Hyderabad, India · US-facing engagements

- Led the team that built a Deloitte-wide inter-firm agreement system enabling member firms to engage and work with each other across borders.
- Key developer on the platform handling client engagements, sales opportunities and engagement financials.
- Owned the Kubernetes and Helm deployment layer of a 17-microservice platform running at 99.9% uptime.
- Owned the team's Azure DevOps board and backlog and served as Scrum Master; primary technical point of contact for US-based stakeholders.
- Managed a lean delivery team handling ServiceNow production tickets against SLA commitments.
- Earned Technology Guild Guru, Deloitte's highest internal recognition for blockchain expertise; built solutions on Hyperledger Fabric and DAML; judged firm-wide blockchain hackathons; mentored 50+ engineers.
- Founding host and two-year communications lead of an engineering community of practice, growing its podcast to 500+ listeners.
- Core team member of a firm-wide COVID-era initiative improving remote hiring and reducing new-employee attrition.

Freelance — Software Engineer

Aug 2025 – Present · Remote

- Built and shipped the website for a registered Nepali non-profit: Next.js, TypeScript and Tailwind CSS, statically exported and deployed via a CI/CD pipeline.
- Built a suite of event and registration microsites with Google Apps Script backends for a hospitality brand.

OPEN SOURCE

Quantum Foundry: Open-source (Apache-2.0) multi-physics simulator for post-silicon and 3D-stacked transistors: cited materials database, Kwant NEGF transport, multi-tier thermal, Monte Carlo yield, Pareto search.

SKILLS

Languages	Python, TypeScript/JavaScript, C#, PHP, C++
Backend & infrastructure	FastAPI, .NET, Node.js, Next.js, Docker, Kubernetes, Helm, GitHub Actions, Azure DevOps
Identity & security	Active Directory/LDAP, Keycloak, OIDC/SSO, WireGuard
Data	PostgreSQL, MongoDB, SQL Server, Redis
AI	Agentic engineering tooling, RAG, vector search, LangChain
Blockchain	Hyperledger Fabric, DAML, Solidity
ERP & quality	Frappe/ERPNext, ISO/IEC 17025 compliance data

EDUCATION AND CERTIFICATIONS

- Master of Computer Applications — Vellore Institute of Technology, 2016–2018
- Bachelor's in Computer Applications — Sharda University, 2013–2016
- IBM Qiskit Global Summer School (Quantum Computing)
- DAML Applications Engineer · DAML Solutions Architect · DAML Associate
- Deloitte Blockchain Architect · Deloitte Hyperledger Fabric 1.4