

# Nikhilesh Yadav

B.Tech in Computer Science and Engineering  
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## EXPERIENCE

### • Senior Software Engineer (Contract)

April 2025 – Present

Payflow (YCS20)

Remote

- Built an AI assistant that analyzes **PL, balance sheets, and cash-flow data** to generate variance explanations, trends, and summarized insights for finance teams.
- Used **RAG over internal financial tables and reports** to ground model outputs, ensuring explanations and narratives are tied to **actual numbers**, not hallucinations.

### • Backend Engineer (Part-time)

Feb 2025 – Present

VerifyU

Bengaluru, India / Remote

- Implemented and maintained **identity, income, and vehicle verification** flows integrating **Aadhaar, PAN, GST** and bank-statement data with fallback handling.
- Managed **production AWS infrastructure** (VPC, secrets, access control, monitoring) with **SOC 2-aligned audit and retention policies**.

### • Senior Fullstack Software Engineer

June 2024 – May '25

PersanaAI (YCW23)

San Francisco, USA

- **Built multiple AI Agents**—including the flagship “Quantum Agent” (**20M+ req/mo**) using OpenAI/Claude APIs with prompt chaining, API tool-use pipelines, **RAG architecture**, and orchestration via **Temporal.io and kafkajs**.
- **Co-designed and implemented a multi-agent system** to generate financial KPIs, risk flags, and narrative insights from ERP/accounting data; achieved **<2s response** with **streaming pipelines, fact/narrative memory layers**, and agent-level parallelism.
- **Rearchitected** an Express monolith into modular NestJS/Golang services with **rate limiting, caching, batching, and real-time streaming**; increased throughput to **1K req/s** and reduced infrastructure costs by **20%**.
- **Created interactive UIs:** Spreadsheets, Dashboards, Live Tables using React, Next.js, Chakra UI, TailwindCSS; added live-editing, **dynamic charts, widgets**; reduced P99 load time **from 5.43s to 1.78s** using **WebSocket/SSE**.
- **Implemented observability stack** (Grafana, Loki, Prometheus, OpenTelemetry); migrated workflows from BullMQ to **Temporal.io**, reducing dangling/failure tasks by **40%/15%**.
- **Led SOC 2 Type I**; drove SOC 2 Type II readiness; trained **4 engineers**, reviewed **50+ PRs**.
- **Tech Stack:** Golang, NestJS, FastAPI, Next.js, React, Chakra UI, TailwindCSS, Redux, PostgreSQL, Redis, MongoDB, Temporal.io, BullMQ, Docker, Kubernetes, Pulumi, AWS, OpenAI

### • Fullstack Engineer

Dec 2022 – May 2024

Fountane Inc.

Minneapolis, USA

- **Led Parkpoolr end-to-end** with direct client interaction; **reduced GCP costs by 30%**, mentored **2 interns**.
- **Built full-stack features** using Angular, React, Node.js, Golang, and **optimized GraphQL APIs**.
- **Migrated infra to Docker Swarm**; set up **CI/CD pipelines** and improved deployment speed.
- **Integrated SSO and RBAC** with Keycloak for internal dashboards.
- **Created Slack AI agent** with Asana, Calendar, Gmail, and Keka API integrations.
- **Tech Stack:** Node.js, Golang, Angular, React, Hasura, GraphQL, Docker, Redis, GCP, GitLab CI/CD, Keycloak, Slack API

### • Full Stack Developer (Intern → Engineer)

Jan 2021 – Nov 2022

Pratilipi, 1DigitalStack.ai, MADPAT GmbH

Germany, South Delhi, Bengaluru

- **Developed full-stack features** with React.js, AngularJS, Node.js API, Python, PostgreSQL, Redis.
- **Migrated AngularJS to React.js**; introduced **rest-hooks, Joi validations, Husky/CI/CD upgrades**.
- **Built secure Credential Vault** (Keycloak, OAuth2.0, JWT). Identified **credential-leak vulnerabilities**.
- **Developed analytics pipelines** using Amplitude, increasing **app installs by 160%**.
- **Automated dev environments** using Docker, Bash scripts, and .devcontainer; integrated **version control workflows** with Git, and pre-commit hooks for consistent code quality.

## TECHNICAL SKILLS AND INTERESTS

**Languages:** JavaScript, TypeScript, Golang, C++, Python, SQL

**Frontend:** React.js, Vue.js, Angular, Chakra UI, TailwindCSS

**Backend:** Node.js, NestJS, Django, Flask, Express.js, GraphQL, Hasura, OAuth2.0, JWT, REST, RabbitMQ

**Infra/Tools:** Docker, GitLab CI/CD, Redis, KafkaJS, Temporal.io, AWS, GCP

**Databases:** PostgreSQL, MongoDB

**Monitoring & Analytics:** Grafana, Prometheus, OpenTelemetry, Amplitude

**Soft Skills:** Mentoring, Ownership, Communication, Problem Solving

## PROJECTS

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-  **Quantum Agent – Enterprise AI Automation**

*PersanaAI, 2024*

- Handled 20M+ requests with external integrations, and scalable orchestration. See Experience section.

-  **C++ REPL – Interactive Language Runtime, TCP Proxy Server**

*c-repl, tcp-proxy*

- Developed full C++ interpreter with CLI and web REPL.
- Built parsers (PEG.js), integrated with GCC/GDB for step-debugging.
- Used worker threads, React.js frontend, Node.js backend.
- Built transparent TCP Proxy in Node.js with connection logging and client authentication.
- Focused on socket-level extensibility and debugging capabilities.

-  **Homelab – Personal Kubernetes Development Environment**

*homelab, 2025*

- Automated infrastructure provisioning for a personal Kubernetes development environment using Terraform and Ansible, engineering a self-hosted K3s cluster with low-level networking (Cilium), ingress (Traefik), and secure remote access via Tailscale (node-to-node overlay network) and custom DNS, deploying services via Helm.
- Implemented custom managed, buildpack-based multi-arch CI/CD pipelines (Tekton, Shipwright) for heterogeneous (ARM64/AMD64) architectures, alongside secure authentication and authorization using Keycloak for all self-hosted applications.
- Self-hosted a comprehensive suite of applications (e.g., Grafana, Harbor, Minio) for a complete development and testing ecosystem, complemented by a robust observability stack (Prometheus, Loki, Tempo) for monitoring and logging.

## EDUCATION

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- **Dr. A. P. J. Abdul Kalam Technical University**

*B.Tech in Computer Science and Engineering*

*Aug 2017 – May 2021*

Lucknow, Uttar Pradesh

- Coursework: DSA, OS, CN, DBMS, Software Engineering, AI, Web Technologies