

Raj Patel

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Professional Summary

AI Engineer and Full Stack Developer with **6+ years of experience** delivering enterprise-grade systems across Banking, FinTech, EdTech, and SaaS — including **3+ years specialized in GenAI and Agentic AI engineering**. Architected and delivered production-grade agentic AI systems at TD Bank, including the **Unified Storefront (USF)** — a **MCP-based multi-agent procurement platform** targeting **\$2M+ in annual savings** — and **Contract Buddy**, an AI-powered contract intelligence platform for procurement and legal teams. Hands-on expertise in **LangChain, LangGraph, RAG pipelines, Azure OpenAI, and Vector Search**, with a track record of taking LLM-powered products from POC to production in regulated fintech environments. Strong full-stack foundation in **Python, FastAPI, React, and Java Spring Boot**, with enterprise security depth across **PKI, JOSE, IBM MQ, Kafka and SAML/OIDC**.

Technical Skills

Languages: TypeScript, JavaScript, Java, Python3, HTML5, CSS3

Frontend: Angular, React, Next.js, React Native, Vanilla JavaScript, Redux, Zustand

Backend: LangGraph, LangChain, FastAPI, Spring Boot, Vercel AI SDK, Node.js

Databases: MySQL, MongoDB, SQL Server (MSSQL), Postgres, SQLite, Pinecone

Cloud: AWS (Amplify, EC2, S3, SQS, SNS, Lambda), Azure (ASP, AI Search, ADF), GitHub Actions, Docker,

Others: Git, Gradle, Jenkins, Maven, Tomcat, Kafka, IBM MQ, RabbitMQ, Powershell, Unix, LlamaIndex, GraphQL

Experience

Senior Full Stack Engineer | Agentic AI - TD Bank (Procurement)

Toronto, ON

Agentic AI, GenAI, LangGraph, React, FastAPI, Python, Kafka, ADF

Nov 2025 – Present

- Architected and spearheaded end-to-end development of the **Unified Storefront (USF) Agentic AI Procurement Platform** — a multi-agent, MCP-based system with a central orchestrator connecting to specialized sub-agents across SAP Ariba, Coupa, Tririga, and Rahona (TD internal data lake), enabling autonomous cross-system data retrieval, entity extraction, and intelligent intake form prefill across TD's technology LOB teams.
- Engineered a **self-serve procurement intake pipeline** using conversational AI to guide LOB teams through structured request creation, submitting completed forms into SAP Ariba via a **UiPath RPA automation layer** — eliminating manual vendor manager dependencies and targeting **\$2M+ in projected annual cost savings**.
- Contributed to key **AI architecture decisions** and built end-to-end **GenAI retrieval pipelines** using Azure OpenAI and LangGraph, implementing Azure AI Search for semantic search, policy validation, and explainable field mapping — with an Agent-to-Agent (A2A) communication model on the forward roadmap.
- Built an enterprise **GenAI-powered contract intelligence platform (Contract Buddy)** enabling automated analysis of NDAs, SOWs, MSAs, and vendor agreements — delivering clause-level risk scoring, semantic policy validation, and structured deviation reports for procurement and legal review teams.
- Delivered both platforms as **production-grade full-stack applications** (React + FastAPI) as the **primary engineer from POC to production**, released under TD's Large GTS Technology Product Group.
- Designed **real-time procurement data synchronization** across SAP Ariba, Coupa, and Rahona via Kafka, enabling near real-time event-driven pipelines across enterprise procurement systems.

Software Engineer II - TD Bank

Toronto, ON

Java Spring Boot, IBM MQ

May 2025 – Nov 2025

- Led a team of 10 engineers to deliver microservices-based banking solutions with API Gateway, distributed tracing, and secure B2B connectivity, driving 100% digitalization and automation.
- Coordinated planning, estimation, and execution with product, vendors, and architects, resolving compliance and multi-vendor challenges to ensure on-time delivery.
- Designed and implemented enterprise-scale **PKI encryption** using **JOSE (JWT + JWE)** and mutual TLS for secure PCI data transmission.
- Migrated legacy SOAP services (via **IBM MQ** and **TSYS**) to modern **REST APIs** in Spring Boot, enhancing performance and interoperability.
- Resolved complex **B2B SSO workflows** with **SAML/OAuth2**, integrating Azure infrastructure for secure identity and secrets management.

Software Engineer I - TD Bank

Toronto, ON

Java Spring Boot, Angular, Python, Terraform, Azure ASP

Jan 2023 – May 2025

- Migrated app from OpenStack to Azure with zero downtime; upgraded **Java 1.8→17** and **Spring Boot 2→3**.
- Integrated Vault and Redis, **reducing** auth **errors** by **20%**; built Datadog dashboards for observability.
- Automated config deployment in Python, cutting time from **2 hours** to under a minute.
- Implemented form pre-population logic for critical credit workflows, saving **1,000+ manual hours** annually.
- Resolved a high-priority issue that stalled UAT for 3 months—cleared it within 4 weeks to enable successful deployment.
- Earned **3×** Great Work Awards, **2×** Quarterly Awards, and TD **Above and Beyond** Award for key project wins.

Quality Engineer Intern/Co-op - TD Bank

Toronto, ON

Selenium, Spring, Java, Gherkin, Automation

Sep 2022 – Dec 2022

- Collaborated with Senior lead developer and learnt best practices to follow while writing automation test cases.
- Automated **60+** complex automation test cases that ensured delivering **100% correctness** of the application.
- Developed **5+** reusable functions for automation test cases that managed to reduce **7000+** lines of code and **300+** hours of manual development time and boost productivity by **20%**.

Full Stack Engineer - Jackett

Remote

Angular, React, Python, NodeJS, Java Spring Boot, MySQL, MongoDB

Sep 2021 – Jul 2022

- Led development of an **Angular MVP** in 3 months, then migrated features to a **React Native app** with a team of seven, securing **\$1.3M in seed funding**.
- Directed hiring, daily stand-ups, and mentoring while completing a full production cycle in under 2 months.
- Built an **image-to-LaTeX pipeline** to digitize and render STEM equations with 100% accuracy, improving accessibility, UX, and boosting app performance by 30%.
- Developed a high-performance **Node.js web scraping service** to extract **1.5M+ questions** from Byju's in 2 days by orchestrating **40+ Dockerized instances** with MongoDB storage; integrated IP rotation service to bypass rate limits and ensure uninterrupted parallel scraping.
- Implemented **CI/CD pipelines** with **AWS (Amplify, EC2, S3, RDS, SES, SNS)**, streamlining deployments and managing production systems.
- Integrated **250+ analytics events** via Segment.io, deep linking with Branch.io, and feature flags with Split.io to enhance engagement and rollout safety.

Frontend Engineer - PingDR

Ahmedabad, India

Angular, NodeJS, MongoDB

Jan 2021 – Aug 2021

- Led a team of **5 developers** to deliver multiple Angular-based projects—including eCommerce, CRM, and event platforms—boosting client operational efficiency by **30%**.
- Owned frontend development and built Angular apps from scratch for **Vacsynk** (vaccination management), **Clisynk** (CRM), and **IQArena** (exam portal), significantly improving UX and system reliability.
- Interfaced with clients to capture evolving business needs, ensuring **100% solution alignment** through Agile sprints and continuous feedback loops.
- Built a reusable UI component library and modular architecture using Angular, NGXS, and RxJS, cutting dev time by **40%** and improving performance by **20%**.

Full Stack Engineer - Alps Logic IT Solution

Gandhinagar, India

Angular, ASP.Net Core, MSSQL, Azure, HTML, SCSS, Python

Jun 2020 – Dec 2020

- Developed and maintained three Angular and .NET projects, ensuring robust performance and scalability.
- Integrated Microsoft Location APIs and government COVID-19 data to assess place safety based on geolocation.
- Built a collaborative Machine Learning platform web app in Angular with interactive UI and reusable components for data scientists and developers.
- Implemented a Python scheduler to automate data fetching, processing, and database updates.

Projects

CoTeach AI | FastAPI, OpenAI, LangChain | [Website](#)

Jan 2024 – May 2025

- Architected and delivered a multi-modal, agentic GenAI-powered Learning Management System (LMS), enabling rapid course generation from PDFs, emails, videos, and internal knowledge sources.
- Built a **LangGraph** and LangChain based Retrieval Augmented Generation (**RAG**) architecture leveraging **Pinecone**, **LlamaIndex**, and **GPT-4**, improving system reliability and response accuracy
- Enabled SMEs to iteratively refine AI-generated outputs instead of starting from scratch, reducing course creation time from **2 weeks to under 5 minutes**
- Developed a secure, scalable backend using **FastAPI** from scratch, with **150+ API endpoints** supporting RBAC, third-party

integrations, course creation cron jobs, multi-tenant organizations, learning paths creations and assignments, and notifications.

- Engineered a **multi-format ingestion pipeline** (PDF, DOCX, HTML, YouTube via Whisper) and integrated **10+ third-party** integrations including Google Drive, Notion, Guru, Confluence to ingest company-specific knowledge into the system.
- Developed a responsive **React** frontend with a **Notion-style editor**, AI chat assistant, Slack/email notifications, and clean UX aligned with Figma designs.
- Led end-to-end full-stack development and system architecture across backend services, frontend components, LLM pipelines, cloud infrastructure and CI/CD pipelines on AWS.

Clisynk (CRM Platform) | Angular, NGXS, RxJS

Jan 2021 – Jul 2021

- Built reusable UI components (Asana-like calendar, Trello-like task board) and core CRM modules (automation, invoicing, document editor, email broadcasting, chat, task management) using **Angular and NGXS**.
- Migrated form builder and finance modules to **NGXS Redux store** and applied **Reactive push-based architecture**, improving scalability and code maintainability.

IQArena (EdTech Platform) | Angular, RxJS, Firebase

2021

- Developed **admin panel UI** with features to publish exams, track payments, and manage multi-role authentications.
- Built a **student performance analytics dashboard** enabling teachers to identify strengths and gaps, powered by **Reactive push-based architecture**.

Vaccsynk (Healthcare Platform) | Angular, Form Builder Library

Jan 2021 – Jul 2021

- Built a vaccine scheduling platform with dynamic **Angular Form Builder** forms to collect vaccination data at scale.
- Developed **role-based admin panels** for pharmacy, facility, and admin users, streamlining vaccine distribution and appointment scheduling.

Education

Master of Applied Computing | University of Windsor, Ontario

Sep 2021 – Dec 2022

Bachelors in computer engineering | Gujarat Technological University, India

Aug 2016 – Aug 2020

Certifications

- **Microsoft - AI900 - Azure AI Fundamentals**
 - Practical exposure to **Azure AI Studio**, prompt engineering, responsible AI, and deploying **Azure OpenAI models**.
- **HackerRank - Angular Certificate**