

Mubarak Muse

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Software engineer with 8 years building production systems across healthcare, logistics, and AI-native products. Deep experience designing microservices, REST and GraphQL APIs, distributed systems, and data pipelines on AWS. Strong healthcare-data domain background (claims, eligibility, CPT/ICD codes, benefit plans). Builds with agentic coding tools daily.

EXPERIENCE

Brighter Tunnel | Lead Software Engineer

Remote | Mar 2023 – Present

- **Prior Auth AI Agent (healthcare AI):** built and shipped an AI and rules engine that reads a clinical note, extracts diagnoses and procedures, matches CPT and ICD-10 against payer rules (deterministic, not LLM-guessed), validates policy criteria, and drafts a grounded prior-auth letter. *FastAPI, React, Claude, AWS (ECS, SQS, DynamoDB, CloudFront), Terraform, GitHub Actions CI/CD.*
- **Opus Eternal (AI audio-to-book pipeline):** architected an agentic multi-stage pipeline that transcribes interview audio and orchestrates LLMs to produce edited book drafts. *Python, FastAPI, LangChain/LangGraph, React.*
- **AI-native LMS:** built a multi-tenant learning management platform with AI-assisted lesson planning, grading, and summarization. *Next.js, Node.js, TypeScript, Supabase (PostgreSQL), OpenAI.*
- **EV charging platform:** built initial software extracting real-time data from charging stations (OCPP protocol) into multi-tenant dashboards. *Next.js, Node.js, PostgreSQL.*

Amazon | Software Engineer

Minneapolis, MN | Jan 2022 – Mar 2023

- **Emergency freight rerouting system:** built an event-driven Python service that reroutes trucks to alternate terminals in real time when a terminal goes down. *AWS Step Functions, Lambda, SQS with dead-letter queues.*
- **Terminal operations dashboard:** built a full-stack app capturing real-time terminal data (shipments, pallets, problem-solving cases) for live operational visibility. *DynamoDB, React, TypeScript, Java, Kotlin, AWS CDK.*

Collective Health | Software Engineer 2

San Francisco, CA | May 2018 – Oct 2021

- Led the **Plans and Benefits domain** during a monolith-to-microservices migration; built two Java Spring Boot services (**120+ API endpoints**) plus a Node.js parsing layer integrating GraphQL, GitHub, and Airtable APIs.
- Designed **flexible, highly configurable data models** for custom plan structures beyond standard benefit design; the source of truth for **~13,500 plans** across 100+ clients (Uber, Pinterest, eBay), consumed by claims, eligibility, and data-science teams.
- Built **Python automation** on a Kubernetes CronJob that detected ICD/CPT code changes and auto-updated the source of truth, replacing a manual multi-API workflow; added a PostgreSQL audit trail with Datadog and Prometheus monitoring.
- Delivered full-stack features (React, TypeScript, Angular) on PostgreSQL-backed services; deployed via Docker, Kubernetes, and Jenkins CI/CD.

Karat | Interview Engineer

Remote | 2022 – 2025

- Conducted **1,000+ technical interviews** for companies including PayPal, Palantir, The New York Times, and Lyft.

SKILLS

Languages: Python, Java, TypeScript, JavaScript, Node.js, Go, SQL

Backend & Data: Spring Boot, FastAPI, Express, microservices, REST & GraphQL APIs, PostgreSQL, DynamoDB, Redis, Supabase, ETL pipelines

Cloud & DevOps: AWS (Lambda, Step Functions, ECS, SQS/SNS, EventBridge, DynamoDB, S3, EC2, CloudFront, CDK), Docker, Kubernetes, Terraform, Jenkins, GitHub Actions, CI/CD

AI: LLM pipelines, RAG, agentic workflows, Anthropic & OpenAI APIs, LangChain/LangGraph, Claude Code, Cursor

EDUCATION

University of Minnesota – Twin Cities | B.S. Computer Science

ADDITIONAL

Languages: Arabic (fluent), English (fluent), Somali (fluent), Spanish (conversational)

Volunteer: Coding instructor at Code Tenderloin | 2019-2020

Interests: traveled to 28 countries