

# MOHAMMED ADNAN

Full-Stack & AI Engineer · San Francisco, CA

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## SUMMARY

Backend engineer with 7 years shipping production systems end to end across logistics, payments and healthcare. Designs REST and gRPC APIs, moves high-volume event streams through Kafka, and runs services on Kubernetes across AWS, GCP and Azure. Now building LLM and agent infrastructure full time, including a pipeline engine with a C++ execution core and a Python node API.

## PROJECTS

- **owle-agent** — closed-loop revenue agent for skilled nursing facilities. Scores a facility for fit and urgency, finds the decision-maker, drafts the email, waits for approval, sends via Gmail, then classifies the reply.
- **voice-calling-assistant** — production voice ordering system: Twilio PSTN transport bridged to Deepgram realtime intelligence, with a Next.js dashboard over Supabase for calls, orders and reservations.
- **crucible** — 10-agent adversarial review system on CrewAI. Assembles its own specialist team, attacks its own answer, rebuilds it, and returns a calibrated score for how far to trust the result.
- **Sophia** — Unitree G1 rebuilt into a custom 27-DoF humanoid with head articulation, extended shoulder yaw, a D435 camera and Mid360 LiDAR. Reauthored the MJCF, actuators and inertials, then retrained locomotion from scratch on rented A100 and 4090 GPUs.
- **robot-gym** — competitive arena for G1 humanoids in MuJoCo. Any policy plugs into one model-adapter interface and is scored on identical physics, so results across frameworks are comparable.
- **Launchpad** — GTM engine that turns a company's homepage into a go-to-market motion: segments the market into buyer personas and builds a scored outbound pipeline plus an inbound content plan.

## EXPERIENCE

### Independent AI Engineer & Builder | Independent — AI Infrastructure & Applied LLMs

May 2025 – Present

- Designed and built an LLM pipeline engine with a C++ execution core and a Python node API, keeping the execution loop fast while extension nodes block, fail and retry without stalling the graph.
- Built multi-agent systems on CrewAI with prompt engineering, RAG and tool/function calling, including an adversarial review loop that scores its own confidence for downstream consumers.
- Deployed a production voice ordering agent with time-aware greetings, advance-order handling and dynamic variable injection, running live for a restaurant, and shipped the React and Next.js interfaces over it: streaming responses, tool-call visualization and agent traces.
- Trained humanoid locomotion policies with PPO in MuJoCo and Isaac Lab, building the simulation and evaluation tooling around them.
- Competed in AI and robotics hackathons including Physical AI Hack, Greptile at YC and MongoDB Build Lab, shipping prototypes in 24–48 hours.

### Team Lead | Centific

May 2024 – May 2025

- Led delivery of AI-powered enterprise modules in Python (Pandas, scikit-learn), architecting the data-processing automation and coordinating scope with product and QA.
- Built Node.js and Express microservices across AWS and Azure with Kubernetes to cut API response times, and deployed Python data pipelines on Kafka.

### Senior Software Engineer | Guidesly

Sep 2023 – Apr 2024

- Owned full-stack delivery of the booking platform: designed REST and gRPC APIs, optimized MongoDB query patterns to cut ML data-retrieval latency 40%, and built React Native layouts for iOS and Android.
- Led cloud modernization on AWS and GCP, containerizing microservices with Docker and Kubernetes to cut deployment time 30% and improve scalability.

### Full Stack Developer | Neudesic Technologies (IBM)

Mar 2022 – Sep 2023

- Built the Hours of Service module for the Mastery logistics platform, ingesting high-volume driver logs in real time through Kafka against federal compliance rules.
- Integrated custom ML models for driver-behavior anomaly detection, cut over-fetching through GraphQL query optimization, and used BigQuery and GCS for warehousing.

### Software Engineer | Yoofoo Technologies

Mar 2019 – Mar 2022

- Built GoZego property-management software (TypeScript, Firebase) automating tenant communications, payments and maintenance, and designed the Reverse Logistics platform in React Native for warehouse returns.

## SKILLS

**Languages:** Python, C++, TypeScript, JavaScript, Go, Java, SQL

**AI / Agents & ML:** Multi-agent orchestration, CrewAI, n8n, prompt engineering, RAG, vector databases, tool/function calling, agent evaluation, PyTorch, TensorFlow, reinforcement learning (PPO), MuJoCo, Isaac Lab, Deepgram, ElevenLabs

**Backend & Data:** Node.js, Express, REST / gRPC / GraphQL, Kafka, microservices, PostgreSQL, MongoDB, Neon, Firebase, Supabase, BigQuery

**Frontend:** React, Next.js, React Native, Redux, streaming AI interfaces, HTML5, CSS3

**Cloud & DevOps:** AWS, GCP, Azure, Docker, Kubernetes, Vercel, Railway, RunPod, CI/CD, Jest, Cypress

## EDUCATION B.Tech, Computer Science & Engineering — TKR College of Engineering and Technology

2015 – 2019