

HASSAN NAEEM

AI/ML Engineer | Full Stack Engineer

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PROFESSIONAL SUMMARY

AI/ML Engineer with 5+ years of experience designing and deploying production-grade AI systems, agentic workflows, and LLM-powered applications. Proven expertise integrating large language models, machine learning pipelines, and real-time data architectures at scale. Deep proficiency in Python, TypeScript, and cloud infrastructure (AWS, GCP, Docker, Kubernetes). Track record of translating complex AI research into high-impact commercial products across HR tech, healthcare, and real estate verticals.

TECHNICAL SKILLS

AI / ML: LangChain, PyTorch, TensorFlow, HuggingFace, OpenAI API, VAPI, Vertex AI, Claude API

Languages: Python, TypeScript, JavaScript (ES6+), SQL

Agentic Frameworks: LangChain Agents, VAPI.ai, Agentic Workflows, RAG Pipelines, LLM Orchestration

Frontend: React.js, Next.js, Redux, GraphQL, Tailwind CSS

Backend: Node.js, Django, FastAPI, REST APIs, GraphQL, RabbitMQ, Socket.io, Redis

Cloud / DevOps: AWS (EC2, S3, Lambda, CloudWatch, IAM), GCP, Docker, Kubernetes, CI/CD, Terraform

Databases: PostgreSQL, MongoDB, Firebase Firestore, MySQL

Tools: Git, Grafana, Figma, JIRA, Agile/Scrum

PROFESSIONAL EXPERIENCE

AI/ML & Frontend Engineer | Culturefy Inc.

Mar 2023 – Oct 2024

Atlanta, GA (Remote) — AI-powered HR Platform

- Architected and deployed a production AI Agent system integrating VAPI.ai LLM, HeyGen, AWS Transcribe, and OpenAI APIs using React.js, Next.js, and Node.js, enabling voice-command interactions, autonomous content generation, and real-time dashboard control at scale.
- Designed and implemented agentic recruitment workflows with LLM-driven candidate ranking, interview scheduling automation, and offer letter generation; integrated BambooHR API for real-time synchronization across job posting pipelines.
- Built scalable campaign intelligence module with GraphQL and Stack-Adapt integration, leveraging ML-driven audience segmentation to optimize promotional content distribution and improve brand engagement metrics.
- Developed real-time communication infrastructure using Firebase Cloud Firestore and 100MS SDK, supporting multimodal interactions (text, image, video, audio, and one-on-one calling) across web and mobile platforms.
- Implemented and maintained CI/CD pipelines on AWS (EC2, S3, CloudWatch) with Docker and Kubernetes for containerized deployments, achieving measurable reduction in release cycle time and improving system reliability.

Software Engineer | Binate Digital

Jan 2022 – Feb 2023

Austin, TX — Digital Marketing & Mobile Platforms Agency

- Led frontend development of Take Charge EV charging platform (React Native, TypeScript, Django, Firebase, Sockets), delivering real-time driver tracking, Authorize.net payment processing, and 100MS audio calling — scaled to production.
- Built DateJar matchmaking application (React Native, GraphQL, Firebase, Agora SDK) with real-time messaging, audio/video calling, push notifications, and in-app purchase flows across iOS and Android.
- Optimized Nouvoprix marketplace (React Native, Django, GraphQL, Google AdMob), implementing advanced product search algorithms, seller promotion packages, and real-time messaging with measurable performance gains.

Associate Software Engineer | MiniBig Technologies

Sep 2020 – Dec 2021

Dubai, Middle-East — Early-Stage E-Commerce & Logistics Startup

- Developed GroceryDone4u e-commerce platform (React Native, Node.js, TypeScript, Firebase, Stripe, Google Maps), implemented multi-store inventory management, food ordering, real-time delivery tracking, and audio calling.
- Optimized Pacsend peer-to-peer package delivery web platform (Angular, TypeScript, Node.js, Firebase, GraphQL, Stripe) with real-time tracking and payment processing infrastructure.

KEY PROJECTS

AI/ML Engineer | Hospital Automation System — Strealth Startup

Feb 2025 – Aug 2025

HIPAA-Compliant Healthcare Platform

- Built HIPAA-compliant frontend with React and TypeScript, integrating secure real-time patient-doctor communication via WebSockets and Firebase; deployed on GCP with MongoDB backend for scalable data management.
- Integrated Vertex AI and Claude API to build automated prescription suggestion engine and predictive hospital resource analytics, reducing manual prescription review time and optimizing inventory allocation.

AI/ML Engineer | Peekly — Real Estate Property Viewer

Nov 2024 – Oct 2025

Hybrid AR/AI Property Platform

- Architected AI-driven property recommendation engine using Vertex AI and Claude API for personalized user experiences; integrated cloud rendering pipeline on GCP with MongoDB for high-throughput property data processing.
- Developed hybrid React Native mobile app with TypeScript, Node.js, and Google Maps API supporting immersive 3D property exploration and AR/VR hologram functionality for virtual furniture placement.

EDUCATION

M.S. Computer Science — Concordia University Saint Paul

B.S. Computer Science — Sir Syed University of Engineering & Technology