

KARAN SAHU

Software Engineer | Applied AI | Backend Systems | Quant Automation

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PROFESSIONAL SUMMARY

Software engineer with 8+ years of experience across production applications, backend systems, applied AI, quantitative automation, XR and technical leadership. building deterministic financial-review workflows with structured ingestion, reconciliation, evidence checks and bounded AI. Previously delivered a local-first Microsoft 365 executive operations platform and earlier led technology/product delivery across quantitative trading, blockchain and realtime systems.

TECHNICAL SKILLS

Applied AI: LLM applications, agentic workflows, tool calling, RAG/retrieval, structured outputs, local LLMs/Ollama, Gemini/Vertex AI, human-in-the-loop, bounded AI

Backend & Data: Python, FastAPI, Node.js, TypeScript, REST APIs, WebSockets, PostgreSQL, SQLite, ClickHouse, Firebase, Microsoft Graph, MSAL/OAuth

Cloud & Infrastructure: Google Cloud, Cloud Run, Cloud SQL, GCS, Docker, CI/CD, Nginx, Tailscale, AWS

Quant & Financial Systems: real-time market data, trading automation, backtesting, broker/exchange APIs, reconciliation, deterministic financial validation, rules engines, structured ledger processing

Additional Engineering: React, C#, Unity, Solidity, blockchain/Web3, VR/AR/XR

PROFESSIONAL EXPERIENCE

AI & Quant Automation Engineer

Nov 2025 - Aug 2026

BLACK INK DEVELOPMENT LLC | United States | Self-employed | Remote

- Built a private local-first executive operations platform integrating Outlook, Calendar, Contacts, OneDrive, Word, Excel and Teams through Microsoft Graph.
- Implemented FastAPI, React/TypeScript, SQLite and MSAL delegated authentication with server-side token handling, owner isolation, rate limits, Docker/Windows deployment, Tailscale access and Ollama-based local reasoning.
- Delivered research, email-drafting, document-preparation, meeting-pack and action-tracking workflows for real business operations.

Head of Technology

Jun 2022 - Nov 2025

Rosato Ventures | Dubai, United Arab Emirates | Full-time

- Led technical due diligence across blockchain, quantitative trading and digital infrastructure, assessing architecture, scalability, code quality, infrastructure and automation reliability.
- Developed and delivered MudraQuant.com (automated crypto trading and arbitrage) and Argha.ai (decentralized NFT minting and asset registry) from planning through architecture, development and operational handoff.

Chief Technology Officer

May 2021 - Jun 2022

Comely Enterprises | Full-time | On-site

- Defined technology direction across Unity gaming, Web2 and blockchain-integrated products; oversaw architecture, development and deployment of 50+ Unity games across mobile, web and real-money gaming platforms.
- Managed cross-functional engineering/product teams and established coding standards, performance optimisation and CI/CD practices; led smart-contract, NFT and decentralized-payment integrations where relevant.

Game & AR/VR Simulations Developer

Jan 2020 - May 2021

NIIT Limited | Gurugram, Haryana, India | Full-time

- Designed and built VR/AR training simulations for manufacturing, construction and logistics across Oculus, HTC Vive, ARKit and ARCore, translating real operational procedures into interactive simulations.

Game Developer

Aug 2017 - Jan 2020

Comely Enterprises | India | Full-time | Hybrid

- Developed Unity mobile games across gameplay, UI/UX and performance; integrated in-app purchases, payment/wallet systems and analytics, and contributed to backend APIs, databases and cloud deployment workflows.

SELECTED SYSTEMS

Prefiler | [link](#)

Pre-filing financial intelligence for accounting professionals. Built around structured ingestion, deterministic reconciliation/rule execution, evidence checks, reporting and bounded AI explanations. Cloud stack includes Firebase Auth, Cloud Run, Cloud SQL/PostgreSQL, GCS and Vertex AI abstraction.

Microsoft 365 Executive Operations Platform

Private local-first system for research, document preparation, email drafting, meeting packs and action tracking. FastAPI, React/TypeScript, SQLite, Microsoft Graph, MSAL delegated auth, Docker, Tailscale and Ollama; no public source repository.

AudienceGraph | [link](#)

Agentic audience-investigation system using Gemini/Vertex AI and the official ClickHouse MCP runtime. Includes schema discovery, evidence-linked cohort analysis, competing-explanation checks, deterministic arithmetic checks and browser/E2E verification.

MudraQuant

Automated crypto trading and arbitrage system delivered at Rosato Ventures, covering real-time market feeds, strategy/backtesting workflows, execution automation and operational handoff.

Greenlight AI | [link](#)

Evidence-backed studio decision system using FastAPI, React/TypeScript, Gemini/Vertex AI and Parallel Search, with evidence validation, deterministic scoring and human decision control.

CERTIFICATIONS

Google AI - Google | Sep 2026 | Credential IXK60WWC6AU5 | [Credential](#)

AI for App Deployment - Google | Sep 2026 | HSQI00EY4DTL | [Credential](#)

AI for App Building - Google | Sep 2026 | BYWK8JSD64SY | [Credential](#)

AI for Data Analysis - Google | Sep 2026 | T1FZPOBRE1HF | [Credential](#)

AI Fundamentals - Google | Aug 2026 | P4PAJ0CDLVBD | [Credential](#)

Additional Google AI credentials: AI for Content Creation; AI for Writing and Communicating; AI for Research and Insights; AI for Brainstorming and Planning. **Earlier:** Learn Advanced AI for Games with Behaviour Trees - Udemy, Jan 2023.