

FARASAT ALI

Software Engineer | Full Stack AI Developer

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WORK EXPERIENCE

Software Engineer Level II

Digital Dividend Global, Karachi, Pakistan | November 2023 - Present

- Mentored more than **3 developers** and enforced best practices for **JavaScript, TypeScript, Python, C#, MERN,** and **.NET Core**, ensuring clean, maintainable code and reducing review cycles by **30%**.
- Develop Agents and fully intelligent systems capable of querying the backend, databases, and a no-code user-defined series of actions using OpenAI & Vector Store.
- Optimized large-scale **AWS Athena queries (300M+ events per tenant)** to achieve **~12x faster performance**, improving data observability for enterprise dashboards.
- Reduced **75% bottlenecks** (memory & timeouts) in microservices by **streaming** and **preemptive management**.
- Eliminated capacity issues during Crons that ingest **millions of events daily** using **ETL, Glue, S3, Lambda, DynamoDB,** and **Kinesis**. Updated logic to save the **DynamoDB** from **timeouts, scaling & payload exceptions**.
- Implemented 3rd party services for compliance, eInvoicing & payments using **Securiti Ai, Zatca, Tamara, HyperPay, ApplePay, AutoHub, Sweater,** and **Ghassal**.
- Transformed a legacy system to a modern monorepo & microservice using **Yarn Workspaces, Yarn Berry, Turborepo, Docker, AWS SAM,** and **Lambda**, cutting the setup time by **80%** and the CI/CD time by **15 minutes**.
- Migrated real-time notifications to **SQS, Lambda,** and **Firebase**. Migrated around **180K lines of code** from **JS** to **Typescript**. Migrated the client-side web app to a server-side compatible application in **React** and **Next.js**.

Front-End Engineer

Star Marketing Pvt. Ltd., Karachi, Pakistan | July 2023 - October 2023

- Rebuilt the website, achieving a **5x reduction** in initial load time with **6x more content** with Server Side Rendering in **Next.js**, also improving the SEO for each city for more than **5000 daily users**.
- Saved **\$1000/month** on **ElastiCache** and **\$250/month** on **App Runner** and **Amplify**.
- Did continuous code reviews for a **junior developer** and collaborated with the design team on requirements.
- Upgraded from **Payload CMS** to **Strapi** with a migration from **MongoDB** to **PostgreSQL**.

Software Engineer

Divine Virtuality | Karachi, Pakistan (On-site) | January 2022 - February 2023

- Led responsive, robust, reactive front-end experiences using **TypeScript, React, Next.js, React Native,** and **MUI**.
- Collaborated on **end-to-end (E2E)** development with **Node.js, Express, MongoDB, PostgreSQL, Stripe,** and **AWS**.

EDUCATION

Bachelor of Science in Computer Science (BSCS)

Bahria University, Karachi, Pakistan | CGPA: 3.76 / 4.0 (Cum Laude) | August 2019 - July 2023

Data Structures & Algorithms, Parallel & Distributed Systems, Neural Networks, AI, Data Mining, Information Security

Foundations of Financial Engineering Certificate

WorldQuant University, Washington, D.C., United States | September 2025 - Expected March 2026

Studying financial modeling, econometrics, and AI-driven decision systems in quantitative finance.

PROFESSIONAL PROJECTS

AppNavi - Scalable Data Observability Platform

Developed a large-scale and distributed event analytics system microservices for enterprise clients, enabling real-time insight into user behavior and operational data.

Technologies: C#, .NET Core, AWS Lambda, Amazon Kinesis, AWS S3, Athena, DynamoDB, TypeScript, OpenAI, Vector Store, Chrome Extension, Firefox Extension, Azure Pipelines, Azure DevOps

CarHub - B2C & B2B Vehicle Marketplace

Developed responsive cross-platform web, mobile, and backend services for 100K+ users to connect vehicle-related services and wholesalers.

Technologies: React, React Native, Node.js, Next.js, MongoDB, Redux Saga, Vite, AWS

SKILLS

- **Programming:** Python, JavaScript, TypeScript, C#, LaTeX, C++, Rust
- **AI, Data & Automation:** Pandas, Numpy, OpenAI, Gemini, Vector Store, Make, n8n, Zapier
- **Systems & Cloud:** Amazon Web Services, Terraform, Docker, Azure DevOps
- **Databases:** MongoDB, PostgreSQL, DynamoDB, Athena, Redis
- **Frameworks:** React, React Native, Next.js, Express, Node.js, FastAPI, .NET Core
- **AI Tools:** Lovable, V0, AntiGravity, Cursor, GitHub Copilot, Claude, Replit

HACKATHONS AND RESEARCH PROJECTS

- **[Redefining the Gaming Industry Through Smart Tokens Using Web 3.0:](#)** Decentralized gaming-asset economy where smart tokens are minted as fungible assets and transform into NFTs at purchase, enabling on-chain ownership, trading, and lending through tokenomics and applied cryptography. **Tech:** JavaScript, TypeScript, React, Next.js, Solidity, HardHat, Ethers.js, WalletConnect, Wagmi, HardHat, Ethereum
- **[HeimdallAI - Autonomous Penetration Testing Platform:](#)** A comprehensive security assessment platform powered by AI agents that provides intelligent vulnerability detection, real-time monitoring, and explainable security insights. **Tech:** JavaScript, TypeScript, React, Next.js, Gemini, Groq, LangChain, Supabase
- **[MirmirOps - Unified Browser Intent Engine:](#)** MirmirOps is a browser-native intent engine that lets people bring their own AI to every website while keeping control, privacy, and permissions at the center. **Tech:** JavaScript, TypeScript, React, Gemini, Groq, Next.js, Turborepo, Tanstack, Transformers, Dexie, WebLLM, MongoDB
- **[SocratIQ - Autonomous Knowledge Refinery:](#)** A marketplace where AI agents post bounties and purchase human reasoning using decentralized verification and instant settlement. **Tech:** JavaScript, TypeScript, React, Next.js, Arc blockchain, USDC, Solidity, Gemini, Groq, Circle, x402, Ethers
- **[OmniFlow OS - Hierarchical Agentic-AI:](#)** A hierarchical agentic-AI framework featuring atomic nano-agents at the base, domain-aware agents at intermediate layers, and a supervisory OmniBrain meta-agent that orchestrates all lower-level agents for complex, multi-step automation. **Tech:** Python, IBM Cloud, IBM Watsonx, Agents, FastAPI
- **[QuantumVerse Protocol:](#)** Presented whitepaper, litepaper, and tokenomics explaining how we will integrate blockchain and AI using **Hybrid Asset Protocol** to transform how users invest by converting fungible tokens into evolving NFTs backed by real-world or digital yield. **Tech:** Nostromo, Qubic, C++, AI
- **[SignFlow:](#)** Proposed and developed a Chrome Extension that performs real-time audio-to-sign-language translation, enabling accessible communication for individuals with hearing impairments. **Tech:** JavaScript, TypeScript, React, Gemini, Qdrant, NLP, Chrome extension
- **[Hermes Nexus - AI-Native Deal Execution Platform:](#)** AI-native workspace unifying procurement, contracting, and compliance workflows into a single evidence-backed graph. Enables cross-module intelligence where a verbal promise from a sales call auto-flags contradictions in a contract and populates compliance evidence. **Tech:** JavaScript, TypeScript, React, Next.js, Python, FastAPI, Gemini, Groq, Neo4j
- **[The Sentiment Signal - Prediction Market Intelligence:](#)** Built an analytics app for Kalshi prediction markets using influence ranking and Random Forest predictor with explainability using Hex Agentic Platform and Notebooks. **Tech:** SQL, Python, Hex, SciKit Learn, Matplotlib
- **[Anchor - Cross-Platform Power Reminders System:](#)** Developed a beautiful, emotionally intelligent reminders system with true cross-device sync and human-centered AI. Features custom snooze logic, weather-aware nudges, and a recurrence engine that non-technical users can actually understand. **Tech:** JavaScript, TypeScript, React, React Native, Expo, Supabase, RevenueCat, Groq
- **[GuildLancer - Guild-Based Bounty Hunting & Resolution with Trust:](#)** Trust-driven bounty marketplace with dynamic trust scoring and a 3-tier dispute workflow (negotiation → AI assist → tribunal). **Tech:** JavaScript, TypeScript, React, Next.js, Tailwind, Framer Motion, MongoDB, GroqCloud, Pusher
- **[VaultShield - Privacy Firewall for Financial Identity:](#)** Local-first mobile verification with ZK proofs + on-device redaction; proof generation optimized to ~10s latency. **Tech:** JavaScript, TypeScript, React, Next.js, Circom, snarkjs, TensorFlow Lite, Node.js relay, Zero Knowledge Proof
- **[Guilds of Value - On-Chain Bounty & Reputation Network:](#)** Smart contracts for bounty escrow, payouts, guilds, reputation, and an AI agent to monitor/claim/submit autonomously. **Tech:** JavaScript, TypeScript, React, Next.js, Solidity, Next.js, Viem/Wagmi, RainbowKit, Turborepo, LangChain, Gemini, Metamask, OpenAI
- **[DecisionLens - Esports Decision Quality Coach:](#)** Match review pipeline highlighting top decisions, win-probability shifts, and counterfactual what-ifs for Valorant and League of Legends. **Tech:** Python, PyTorch, Jupyter, Dendrites, PerforatedAI, PerforatedAI Backdrope
- **[CIFAR-10 Dendritic Comparison:](#)** Match review pipeline highlighting top decisions, win-probability shifts, and

counterfactual what-ifs for Valorant and League of Legends. **Tech:** JavaScript, TypeScript, React, Next.js, XAI, XGBoost, Grid API, JetBrains WebStorm, Junie

- **AutoSyndicate™:** Executable Loan Lifecycle Prototype: Modeled “loans as living assets” across origination→monitoring; concept-first prototype for practitioners. **Tech:** JavaScript, TypeScript, React, Next.js, FastAPI, Python, Prisma

OPENSOURCE

- **React Consent Management Banner:** Beautiful and Highly Customizable GDPR/ePrivacy React Consent and Cookie Management Library for React and Next.js
- **Next Static Search:** A powerful React search based on PageFind with a beautiful UI
- **Mongoose to ERD:** Convert your Mongoose schema to an Entity Relationship Diagram easily
- **React Adblocker Detect:** A lightweight React component that detects if an ad blocker is active in the user's browser and conditionally renders UI elements or triggers custom actions.
- **React Google Ads Advanced:** A React component for integrating Google Ads with the capability to suppress ads that are unfilled or not loaded, enhancing user experience by avoiding empty ad spaces.
- **Smoky Fluid Cursor:** A customizable fluid cursor effect for Vanilla JavaScript/TypeScript applications running on the web. Enhance user experience with smooth, interactive cursor animations. Perfect for modern web designs.
- **React Smokey Fluid Cursor:** A customizable fluid cursor effect for React & Next.js Apps running on the web. Enhance user experience with smooth, interactive cursor animations. Perfect for modern web designs.
- **PyLatestTrends:** Python library that allows you to fetch and analyze trending topics from Google Trends.

ACHIEVEMENTS

- **Scholarships:**
 - Received a **full scholarship** for an **accredited two-semester Quantum Computing** program from **Qubit By Qubit, Google Quantum AI, & IBM Quantum**, jointly prepared and taught by **MIT, UC Berkley & Stanford**.
 - Received a **70% merit scholarship** to study a **BSCS** at **Bahria University**, where I graduated **Cum Laude**.
 - Awarded a **75% merit scholarship** for the **MBA in Leadership and Management** from **Valar Institute**.
 - Selected for the **MSc in Financial Engineering at WorldQuant University**, currently pursuing a **6-month “Foundations of Financial Engineering Certificate”** track.
- **Competitions & Contests:**
 - Ranked among the **top 100 contestants** in the **M(IT)^2 2025 Winter Contest** prepared by **MIT University**.
 - Solved **9 out of 9** puzzles in **CS50x Puzzle Day 2025**, conducted by **Harvard University**.
 - Ranked **22nd out of 538** competitors on a country level in the **CALICO Fall '25 Competition** by **UC Berkley**.
- **Leadership, Open Source Contribution, and Miscellaneous:**
 - Led Final Year Project team and got a **4.0 GPA** and endorsement from **Binance (crypto company) externals**.
 - Successfully rolled out **8+ open-source packages** on **PyPi** and **NPM** and published **20+ articles** on **Medium**.
 - Enhanced algorithmic skills through solving **350+ programming challenges**, with **350-day** consistency.
 - Achieved **7.0 bands** in **IELTS Academic** with bands in each module as follows: L: 8.0, R: 7.5, W: 6.5, S: 6.5

CERTIFICATIONS & COURSES

- **AI, Machine Learning & Cloud:**
 - DeepLearning.AI TensorFlow Developer Specialization [Coursera](#)
 - Generative AI for Software Developers Specialization [IBM](#)
 - AWS Certified Cloud Practitioner [Amazon](#)
 - Microsoft Certified: Azure Fundamentals [Microsoft](#)
- **Blockchain, Quantum Computing & Cryptography:**
 - Introduction to Quantum Computing [QubitXQubit](#)
 - Blockchain (University at Buffalo) [Coursera](#)
 - Introduction to Applied Cryptography (University of Colorado) [Coursera](#)

SOCIALS

- LinkedIn (<https://linkedin.com/in/faraasat>)
- GitHub (<http://github.com/faraasat>)
- Medium (<https://faraasat.medium.com>)
- NPM (<http://npmjs.com/~faraasat>)
- PyPi (<http://pypi.org/user/farasat>)
- Leetcode (<http://leetcode.com/u/faraasat>)