

Fareez Ahmed

Software Engineer

Contact

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Skills

Frontend: ReactJS, Next.js, TypeScript, JavaScript (ES6+), Redux, Storybook, HTML5, CSS3, Angular, D3.js, Chart.js

Backend: Node.js, Express.js, Python, FastAPI, Flask, Ruby on Rails, Java

AI / Machine Learning:

- **Python Stack:** PyTorch, TensorFlow, Scikit-Learn, Keras, Hugging Face Transformers, LangChain, LlamaIndex, OpenAI API, MLflow, Feature Store, Model Registry
- **JavaScript Stack:** TensorFlow.js, Brain.js, ONNX.js, Synaptic.js, WebDNN, tfjs-vis
- **Prompt Engineering / LLM Development:**
 - Retrieval-Augmented Generation (RAG) pipelines

Senior Software Engineer (**Active Secret Clearance**) specializing in full-stack development, applied machine learning, and AI integration. Over 10 years of experience designing, building, and deploying secure, scalable, and intelligent systems for enterprise and government clients. Experienced in integrating deep learning models (Transformers, CNNs, RNNs) into production-grade web and cloud environments, implementing MLOps pipelines, and engineering advanced **LLM workflows** using **prompt chaining, contextual embeddings, and retrieval-augmented generation (RAG)**. Recognized for **top-tier prompt engineering proficiency**, skilled at translating complex business logic into optimized conversational and generative AI behavior. Adept in both **Python** and **JavaScript** AI ecosystems.

Work History

2018-11 -
Current

Sr Software Engineer

V2 Software LLC

Mayo Clinic – Digital Experience Platform (AEM/React)

- Lead Front-End Engineer for Adobe Experience Manager (AEM) CaaS implementation with Content Fragments (CF) powering the enterprise digital ecosystem.
- Built and maintained React/Next.js components integrated with AEM headless APIs via GraphQL, enabling reusable content delivery across multiple sites.
- Implemented Storybook for component documentation and collaboration, ensuring UI consistency across distributed teams.
- Architected dynamic breadcrumb, LevelTwoNavigation, and PrintPage servlet refactor, improving accessibility, performance, and maintainability.
- Developed data-driven UI components using TypeScript and GraphQL schemas, adhering to strict enterprise design standards and HIPAA compliance.
- Improved CI/CD workflows in GitLab and AWS CodeBuild for faster, more reliable releases across multiple environments.
- Contributed to AI-assisted authoring initiatives, building prototypes leveraging prompt engineering, semantic text classification, and LLM-based content tagging to enhance author productivity and metadata accuracy in AEM.

JP Morgan Chase

- Built AI-powered analytics dashboards in Next.js/React for internal risk scoring and performance reporting.
- Optimized ML microservice pipelines using GitHub

- Embedding-based semantic search (Pinecone, FAISS, ChromaDB)
- Chain-of-thought prompting, context window optimization, and zero-/few-shot design
- Custom prompt architectures using LangChain / LlamaIndex
- Fine-tuning small models (LoRA/QLoRA) for domain-specific applications
- Chat interface and summarization integrations with OpenAI and Hugging Face APIs

Data / MLOps: Spark, Apache Beam, Ray, Pandas, NumPy, Docker, Kubernetes, DVC, Prefect, Airflow

Visualization: Plotly, Matplotlib, Seaborn, SHAP/LIME Explainability Tools, tfjs-vis

Cloud / DevOps: AWS (Lambda, S3, EC2, Step Functions, CodeBuild), GCP (Vertex AI, Cloud Run), Azure ML, CI/CD (GitLab, GitHub Actions, CircleCI)

Security / Compliance: DISA STIGs, RMF, Secure Coding Practices, Data Privacy, AI Ethics & Responsible AI

- Actions and Cypress for automated E2E validation.
- Improved LCP/FCP/CLS/TTFB metrics using Lighthouse CI and performance regression monitoring.

College Board

- Architected a React micro-frontend for the Student Portal application.
- Developed ML recommendation features for financial aid tools using Node.js, AWS Lambda, and Step Functions.
- Collaborated on AWS Serverless ML workloads, optimizing compute and storage with S3 triggers and Step Functions.

Rivian Automotive

- Built front-end features in React/Redux integrated with AWS Amplify and Python Lambdas.
- Used DynamoDB, S3, and Step Functions to manage asynchronous model updates and workflow automation.

Bayer (Pharmaceuticals Division)

- Developed Electron-based Angular 9 desktop app for medical AI tooling.
- Used NgRx (RxJS-based Redux), MongoDB, and socket.io for real-time inference data visualization.

2017-06 -
2018-11

Senior Software Engineer

CoStar Realty Group, Washington DC

- NodeJS developer on Costar Mobile App, the Zillow for Commercial Real Estate Brokers.
- As a part of BFF (Backend for Frontend) architecture, developed APIs for Android, iOS (mobile and watch) apps.
- Web developer for Listing Manager product, used ES6, CSS/HTML/JCX, ReactJS.
- Used Kinesis data streams for email notifications feature in conjunction with AWS Lambdas (NodeJS) & API Gateway.

2016-08 -
2017-03

Sr Software Engineer

DataScan, Alpharetta, GA

- Javascript developer for WIRE, a wholesale transaction system for dealerships around the US to track automobile loans/assets and payments.
- Used Angular 1.6/ES6 and Webpack for developing reusable components. Developed dashboard with D3.
- Used NodeJS and ExpressJS for server side features.

2015-11 -
2016-08

Software Engineer

General Electric

- Front-End Developer for Supply Chain Management Software used by one of the largest railcar management companies in the US (Norfolk Southern).
- Built key features of flagship product from the ground up using AngularJS 1.4, HTML, CSS, NodeJS.

Education

2007-09 -
2009-05

MA: Economics

Columbia University - New York, NY

2025-10

Professional Certificates

DeepLearning.AI And Udemy

- **Udemy: Reactive Angular Course** — Angular 20
- **DeepLearning.AI**
 - Mathematics for Machine Learning and Data Science
 - Data Analytics Foundations

In Progress:

Machine Learning Specialization

Deep Learning Specialization