Zhalok Rahman

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Video Introduction: https://www.loom.com/share/c5ab46a4737244edafd9f052555767a1

Experience

Kinetik Healthcare *Software Engineer 2*
2025-04-01 – Present

- Worked with Kinetik Healthcares Trip Assistant team as a contractor from Datatree Technology.
- Fixed SQS and Lambda based bulk dispatch workflow to ensure only corrupted trips are not dispatched in the batch.
- Implemented realtime notification system using MongoDB CDC, Redis Streams, and WebSocket.
- Designed RBAC mechanism with Access Control Matrix and ensured realtime revocation with CDC streams.
- Migrated trip dashboard to AG Grid for smoother and cleaner implementation.
- Conducted load testing on APIs and monitored resource usage under stress from CloudWatch.

PropertyFinder *Software Engineer*
2024-10-01 – 2025-10-31

- Worked in their listing b2b engineering backend as contractor from All Generation Tech
- Built API endpoints with API Gateway, Lambda (go), DynamoDB and Opensearch
- Performed load testing experiment with go script and created a dashboard with necessary metrics to observe the changes in high load
- Implemented asynchronous business logics with SQS, Lambda (go) and Kinesis streams
- Fixed and investigated production incidents,
- Collaborated with data engineering team for fixing data migration issues
- Deployed application with serverless framework and github actions
- Written go scripts for resolving incident and migration of data

Learnyx AI *Fullstack Engineer*
2023-10-01 – 2025-02-01

- Built RESTful API endpoints with Nest JS and Built front-end components with React JS, fetched data with TanStack Query.
- Built AI generation pipeline with Python, FastAPI, and Langchain and used websocket for realtime AI generation streaming
- Offloaded time consuming operations like image generation asynchronously with RabbitMQ
- Implemented usage based rate limiting and locked the user for a certain period with redis TTL
- Prepared a home server as a staging server with NGINX, Ngrok and docker for UAT
- Participated in business decisions from technical point of view with business stakeholders
- Designed architectures and solution diagrams
- Guided a small team of 2-3 people on different architectures and best practices
- Decoupled heavy operations as async jobs with RabbitMQ
- Built search efficient functionality with elasticsearch
- Implemented payment feature with stripe, synced stripe data across the system with webhook
- Deployed and managed application infrastructure with containerization into self hosted environment with coolify

Innovext IT *Fullstack Developer*
2022-12-01 – 2023-10-01

- Built REST apis with Nest JS, Express JS and FastAPI (for deploying fine-tuned model)
- Implemented payment and monetary transaction features by integrating third party payment gateways (stripe and paypal)
- Built client side application with Next JS, used Redux for efficient data fetching and dataflow
- Built an internal monetization system with credits, ensured smooth credit transfer with mongodb sessions
- Built server with FastAPI for inferencing fine-tuned object detection model in onnx format

Skills

React , Node JS (Nest JS, Express JS), Next JS, Microservices, PostreSQL, Python (Fastapi, asyncio), Docker, MongoDB, NLP, LLM, Computer Vision, Pytorch

Projects

Data Stores Python

https://github.com/zhalok/data-stores-python

- Built TCP servers with stream sockets in multi-threaded one thread per connection i/o, single-thread non-blocking i/o and single-threaded non-blocking event-driven i/o
- Conducted stress testing with high load concurrency simulation with goroutines
- Observed resource usages of containers via CAdvisor

Tech: Python, Socket, System Calls

Remote Browser Control

https://github.com/zhalok/remote-browser-control

- Created and controlled browser session with playwright
- Built FastAPI app for recieving commands for playwright to apply on browser session via websocket and emit current snapshot of the browser
- Created a front end app with react to render the remote browser session and also send commands via websocket
- Demo: https://www.loom.com/share/04b79ed90e344c94a2c50a5b790cda73

Tech: Playwright, Python, FastAPI, WebSocket

Go Http From Scratch System Calls

https://github.com/zhalok/go-http-from-scratch-system-calls

- Built http protocol from sockets and systemcalls
- Prsed HTTP request headers and payload
- Handled graceful connection closing

Tech: Golang, Syscalls, OSSignals, Sockets

AI Product Search

https://github.com/zhalok/ai-product-search

- Built async vector indexing pipeline from csv file with RabbitMQ and Qdrant
- Built inferencing and searching pipeline with FastAPI
- Used finetuned self hosted SBERT model for generating embedding

Tech: FastAPI, VectorDB (Qdrant), RabbitMQ, SBERT

Ecommerce GraphQL Backend

https://github.com/zhalok/ecommerce-graphql-backend

- Built product crud operations with role based access control using NestJS and TypeScript
- Used GraphQL for serving endpoints
- Used Prisma for database operations
- Demo: https://www.loom.com/share/467b33c9742845a2bb78b84d633fb3cf

Tech: Nest JS, GraphQL, Prisma, Postgresql

Certifications

Fundamentals of Operating Systems

Udemy

https://www.udemy.com/certificate/UC-ff0d44a3-8917-40cd-aef9-a01e258aee49/

Learned about Process structure, Memory managment, CPU cycles, I/O management

NodeJS Internals and Architecture

Udemy

https://www.udemy.com/certificate/UC-2068cbe0-b17c-47ca-b298-d8acb94b30e2/

Learned about internal architecture of node js, event loop, asyncio, node js child process, node js worker threads, efficient usage of node js for building scalable backend applications

Supervised Machine Learning: Regression and Classification

Coursera

https://www.coursera.org/account/accomplishments/certificate/SZT92254XUUY

Learned about foundational fundamental of regression and classification machine learning algorithms

Education

Shahjalal University of Science and Technology

Bachelors of Science in Computer Science

2019-01-01 – 2024-04-01