Manzood Naqvi

Software Engineer | Backend, Systems & AI | Candidate Master on Codeforces

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Independent Engineering Projects   Dec 2024 – Present

Inkwell.nvim: AI Code Completion for Neovim

- Built an **AI-powered Neovim completion plugin** in **Lua** featuring context-aware inline suggestions, with diff previews displayed through ghost-text functionality and pop-up windows
- Implemented **async request handling** with debouncing and cancellation of stale requests. Supports multiple AI models

Distributed Job Scheduler

- Designed a **distributed task scheduler** in **C++** that uses **Redis** for coordination, atomic job dispatch, and safe concurrent execution across multiple worker machines
- Supports **scheduled tasks**, **atomic job claiming** and **scalable worker coordination** while **avoiding race conditions**

Work Experience

Goldman Sachs, Analyst   July 2023 – Nov 2024

- Redesigned an asynchronous data backfill pipeline, ensuring data consistency via **MongoDB** and streamed metrics to **Elasticsearch** using **Kafka**, reducing human error by an estimated **30%** across thousands of monthly requests
- Developed **Java-based endpoints** to simulate business logic and generate output diffs, improving platform debugging and review workflows
- Migrated data across data warehouses, optimizing queries and improving performance by **40%**

Goldman Sachs, Summer Analyst   June 2022 – July 2022

- Built a modern **React/Redux + TypeScript** User Interface for **1000+ users**, replacing a legacy system and streamlining internal workflows
- **Improved UI load times** by **50%** through efficient data loading strategies and rendering optimizations

Key Achievements

- **Candidate Master** on **Codeforces**: Max Rating of 1997 (Feb 2025)
- **5 Stars** on **CodeChef**: Max Rating of 2133 (Dec 2024)
- **Global Rank 210** (India Rank 13) in **Google Code Jam Round 1B 2022**
- **Global Rank 654** in **Meta Hacker Cup Round 2 2022**
- **Google Kickstart**: **Global Rank 433** (Round F 2022), **Global Rank 403** (Round H 2021)
- **ICPC Amritapuri Regionals**: Ranked 68th Nationally in 2023, and 126th Nationally in 2022
- **Techwarts Gameathon 2021**: won **1st Place** and "Best Game" Award for a game made with **Unity**

Projects

Neural Network and LLMs from scratch

- Built a **reverse-mode autodiff engine** to train Neural Networks in Python, following Andrej Karpathy's AI series
- Implemented **forward/backward pass**, manual **gradient descent**, and **character-level Bigram/Trigram models** without ML libraries

Education

PES University, Bachelors in Computer Science and Engineering   August 2019 - May 2023

- **Competitive Programming Lead** of the CodeChef PESU ECC chapter: Authored **30+ problems** across 3 contests with **100+ participants**; delivered a **guest lecture** on Competitive Programming to 60+ students

Skills

C++, Java, Python, TypeScript, React/Redux, Lua, SQL · distributed systems, concurrency · Redis, Kafka, MongoDB, Elasticsearch · Linux, Git, Neovim