

TARIF KHAN

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EDUCATION

Northeastern University, Khoury College of Computer Sciences | Boston, MA *Anticipated Graduation: May 2025*
Candidate for BS in Computer Science | Concentration: Artificial Intelligence **GPA: 3.5**
Relevant Coursework: Object Oriented Design, Algorithms & Data Structures, Software Development, Web Development

WORK EXPERIENCE

Wellington Management | Boston, MA *Technologies used: Python, SQL, Tableau, Linux, Pandas, NumPy*
Quantitative Researcher *December 2023 - July 2024*

- Developed pre-trade cost models for Municipal Bonds, Securitized Products, Derivatives and Futures in Python
- Built a notebook to process CitiBank and Morgan Stanley BWIC files daily and store tables in two data lakes
- Engineered a notebook to scrape a general inbox of trade insights and summarize everything using the GPT-4 API
- Published an internal paper on Artificial Intelligence
- Implemented a notebook to scrape HIVE and CitiBank IOI emails and process the data into two data lakes
- Developed a notebook to scrape William Blair IOI PDFs and process the data into a data lake
- Deployed an internal API for scraping and processing Outlook emails

Khoury College of Computer Sciences at Northeastern University | Boston, MA

Teaching Assistant: Algorithms and Data Structures

April 2024 - June 2024

- Assisted 110 students by holding office hours, and instructing recitations
- Graded weekly homework assignments, midterm exam, and the final exam alongside professors

Career Peer Ambassador

September 2023 - April 2024

- Mentored 328 freshmen from the class of 2027 with regards to class programming and career planning
- Connected 43 freshmen from low income minority backgrounds to summer internships in computer science

Quantum Technologies | Manhattan, NY

Technologies Used: Python, SQL, Pandas, Pytorch, NumPy

Quantitative Software Engineer

June 2023 - September 2023

- Collaborated with quantitative researchers to automate a proprietary trading system for XAUUSD using Python
- Assisted traders in managing risk and adhering to regulations for trades executed through automation
- Generated over one million dollars by automating trades
- Created a SQL-based database infrastructure to store and manage trade history details

Scotiabank | Manhattan, NY

Technologies Used: Java, SQL, Java Swing, Linux, Solaris

Software Engineer | Full time

January 2023 - June 2023

- Designed a platform for 15 financial institutions to locate trade files by using a Swift Reference or Message ID
- Formulated SQL queries from XML property files with JavaSQL to match input to a single or grouped trade file
- SSHed into 6 unique servers using JSCH to search for, display contents, and present file paths for matching files
- Developed a toggle to split the 6 steps between a Solaris server and a Linux server before execution
- Leveraged Java Swing prioritizing a Multiple Document Interface and JTables for the GUI

PERSONAL AND ACADEMIC PROJECTS

MakeMoney Stock Tracking Tool | Boston, MA

December 2023

- Engineered the backend infrastructure using Node.js, Express, Axios, and MongoDB
- Wielded the Yahoo Finance API to fetch and store real-time stock data
- Developed the frontend with React, JavaScript, and Redux, empowering users to manage their stock portfolios

Youtube Video Analysis Tool | Boston, MA

December 2022

- Engineered a program in Python with Jupyter Notebook to model whether a Youtube video would be successful
- Trained the model using sklearn as a decision tree and linear regression model through hyper parameter tuning
- Published and visualized findings using pandas, numpy, and seaborn after cleaning Youtube's data

NUFS File System | Boston, MA

November 2022

- Created a file system in C using NDFS where files, directories, and other types of data can be stored
- Designed the file system to create, modify, delete, and allocate memory for single use as well as looped use

COMPUTER KNOWLEDGE

Programming Languages: Java, HTML, CSS, Python, Assembly, C, C++, JavaScript, React, Node.JS, Typescript

Environment Knowledge: Eclipse, Visual Studio Code, IntelliJ Idea Ultimate, Github, Terminal, Jupyter Notebook