Sankalp Chapalgaonkar

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Seeking Summer 2023 internship

Education

Texas A&M University **Aug 2022 - May 2024**
Master's of Science, Computer Science College Station, USA

Indian Institute of Technology Madras **July 2015 - May 2019**
Bachelor of Technology, Electrical Engineering Chennai, India

Coursework: Analysis of Algorithms, Machine Learning, Operating Systems, Information Retrieval, Systematic Trading Strategies, Data Mining, Computer Architecture, Linear Algebra, Complex Network Analysis, Data Structures & Algorithms

Experience

JP Morgan Chase & Co **July 2019 - July 2022**
Software Development Engineer II Mumbai, India

- Worked with the Wealth Management division in the Advisor Connect team developing CRM software for advisors.
- Led the legacy transformation project moving from monolithic design to microservice infrastructure having 3-Tier de-coupled reactive web apps built using Java, Oracle, Spring Boot, Kafka, Elasticsearch and deployed using Kubernetes.
- Designed an automated tool for scheduling intraday/daily/weekly ETL (Extract/Transform/Load) jobs for Data Migration/Processing of 5M+ records using Spring Cloud Data Flow, thus reducing immense manual work.
- Engineered software within 6 months, deployed it across 3 regions, providing a one-stop-shop solution for 5000+ advisors, having all the required data in one screen instead of navigating through separate applications.
- Developed an algorithm for optimal data reconciliation by comparing 10M+ records daily. Built an interactive dashboard with having graphical visualization of these data inconsistencies and equipped with automated reconciliation options.

JP Morgan Chase & Co **May 2018 - Jul 2018**
Technology Analyst Intern Mumbai, India

- Worked as a full-stack developer with the Asset Management division as a part of the Structured Product team developing a document-inventory workflow supporting 10+ format uploads which was used by 2000+ investors globally.
- Developed an application using ReactJS, typescript, Spring Boot, and SQL Server and deployed it to the in-house cloud infrastructure using Jenkins tools for CICD deployment. Leveraged Mockito and JEST testing frameworks.

Technical Skills

Languages: Java (Reactive), C++, Python, R, C#, .NET, SQL, GraphQL, Kotlin, Javascript, Typescript, HTML/CSS

Frameworks & Tools: React, Ionic, Kafka, Spring Boot, Spring Webflux, Splunk, GCP, AWS, Kubernetes, Reddis

DBMS & Security: Oracle, SQL Server, Elasticsearch, Hibernate, Liquibase, ADFS, Kerberos, OAuth, JWT

Projects

Routing Algorithms and Network Optimization, *Prof. Jianer Chen* Aug 2022 - Dec 2022

- Implemented Dijkstra's and Kruskal's algorithms for sparse and dense graphs to determine the maximum bandwidth path in network optimization challenges, and modified to use heap sort for improved performance.
- Built a Random Graph Generator for sparse and dense graphs in java using various data structures (such as Linked Lists and HashMaps) and analyzed theoretical vs practical run-time complexities of algorithms.

Automated Trading Bot, *Machine Learning Project, JP Morgan Chase & Co* Jul 2020 - Feb 2021

- Developed and implemented an automated trading bot using Python and various financial libraries (such as Pandas, NumPy, and Ta-Lib) for technical analysis and machine learning-based predictions.
- Implemented machine learning algorithms (such as LSTM and Random Forest) to make predictions on simulated market movements and optimize trading strategies, resulting in an improved return on investment.

Mars Rover Team, *Software and Electronics Lead, Indian Institute of Technology Madras* May 2016 - Apr 2018

- Co-founded a 3-tier team of 30+ members to develop 2 Mars Rovers, represented IIT Madras in International Rover Series (University Rover Challenge) organized by Mars Society in the USA and ranked 25th among 90+ global teams.
- Coded drift compensation algorithms that dynamically corrected the rover's path during automated terrain traversal task and used Image Segmentation computer vision algorithm to detect physical markers in the vicinity of the GPS location.

Achievements

IIT-JEE Advanced 2015 Secured All India Rank 514 amongst 200,000 shortlisted candidates

Received the **Best Research Paper Award** for my work on Li-Fi presented at the 44th APAN Conference in Aug 2017.

Awarded for the **Best Incoming SEP Project** across the ASIA Pacific region in JP Morgan Chase in Dec 2019.

Won **Circle Of Excellence Award in the Above & Beyond Category** at JPMC for best performer of the year in 2020.