Haseeba Fathiya Fazlur Rahman

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EXPERIENCE

***Graduate Research Assistant,* New York University,** New York, NY — October 2022 - Present

- Automated the data collection process for social science research by designing and programming highly efficient web scraping algorithms using Python and Selenium that scraped ~115,000 records, resulting in an astounding 5000% increase in efficiency.

***Software Engineering Intern,* Earnest,** San Francisco, CA — June 2022 - August 2022

- Engineered cosigner invitation features that enabled more borrowers to refinance student loans.
- Developed APIs for multiple microservices with unit tests for their handlers using Mocha and Sinon.
- Implemented and successfully delivered cosigner features by updating backend services using Node.js, JavaScript, Sequelize, PostgreSQL, and front-end using AngularJS and SCSS, along with other technologies such as Postman, Jenkins and Docker, resulting in a more user-friendly application.

***Software Engineering Intern,* Nikita Software Services,** ON, Canada — July 2020 - February 2021

- Led a team of 4 developers the successful development of a Java software that enabled users to easily create test suites without writing code, which reduced the time to create test cases by 50%.
- Engineered and implemented the Object Repository (OR) module which automatically retrieved locators from web pages at the rate of 50 static pages/minute and stored them in the database.
- Developed a web crawler for the app with code optimization which improved crawling speed by ~20%.
- Collaborated on back end of automated testing module which uses locators collected by OR module.

PROJECTS

Shopping Cart Microservice [Link] — February 2023 - Present

- Designed and developed a shopping cart microservice with Flask and REST APIs, incorporating DevOps practices.
- Implemented a CI/CD pipeline using GitHub Actions and Docker containers to deploy the application on an IBM Cloud Kubernetes cluster, leveraging PostgreSQL for data persistence.
- Employed TDD and BDD methodologies to ensure code quality, with UI testing done using Selenium. Utilized ZenHub as a project management tool to effectively manage tasks and workflows.

Comparison of Deploying Deep Learning Models with MLflow on Different Cloud Platforms
September 2022 - December 2022

- Built Docker images of MLflow servers and deployed them on Kubernetes clusters in IBM Cloud, Google Cloud Platform and AWS with their corresponding storage buckets and PostgreSQL databases and evaluated the deployment processes.
- Deployed AlexNet model training jobs on the three cloud platforms, compared performance metrics and served the model through a Flask application.

Cross-Domain Shopping and Stock Trend Analysis [Link] — September 2022 - December 2022

- Applied MapReduce programming model to clean and process ~ 3 million tweets on Dataproc.
- Utilized Hive and Tableau to perform correlation analysis of large datasets (>1 GB) on stock prices, Twitter stock news, and user behavior on ecommerce websites.

Operating Systems Labs - C++ — February 2022 - April 2022

- Coded a two-pass linker which takes multiple object modules and resolves external references and module relative addressing by assigning global addresses after placing the modules' object code at global addresses.
- Implemented discrete event simulation of process/thread scheduling policies such as FIFO, SRTF, Round Robin, Preemptive Priority Scheduling, etc.
- Simulated the operation of the OS's virtual memory manager that mapped virtual address spaces of multiple processes onto physical frames using page table translation.
- Implemented and simulated the scheduling and optimization of I/O operations.

UniConnect: A web application for graduate students [Link] — March 2021 - June 2021

- Designed and implemented a university admissions predictor and customized recommender system using machine learning techniques trained on data scraped from online sources, which are targeted towards students wishing to pursue graduate studies. Developed models had accuracies of ~81%.
- Developed a review sentiment analysis model with accuracy 86% using NLTK to aid decision making.
- Built the social networking component of the web app built using Django which allowed students to connect with others from different schools and had chat functionality.

PUBLICATIONS

- **"Exploratory Data Analysis on Aviation Dataset, "** International Conference on Computational Intelligence and Knowledge Economy (ICCIKE). IEEE, 2021. [Link]
- **"University Admissions Predictor Using Logistic Regression, "** International Conference on Computational Intelligence and Knowledge Economy (ICCIKE). IEEE, 2021. [Link]

SKILLS

Programming Languages and DB:

Python, Java, JavaScript, C++, C
HTML, CSS, SQL, NoSQL, Shell Scripting

Tools & Frameworks:

Django, Flask, Node.js, Docker, Kubernetes, Git, AngularJS, Hive, Android Studio, Selenium, Arduino, Hadoop, PyTorch, TensorFlow, OpenCV, Tableau, REST APIs, GitHub Actions, JIRA, ZenHub

EDUCATION

New York University, New York, USA

MS in Computer Science
August 2021 - May 2023
GPA - 3.89 / 4

Amity University, Dubai, UAE

B.Tech. Computer Science & Engineering
September 2017 - June 2021
GPA - 9.5 / 10

RELEVANT COURSEWORK

- Fundamental Algorithms
- Artificial Intelligence
- Operating Systems
- Big Data Science
- Vision meets ML
- Natural Language Processing
- Cloud and Machine Learning
- Realtime and Big Data Analytics
- DevOps and Agile Methodologies
- Applied Cryptography and Network Security
- Data Structures
- Mobile App Development
- Database Management Systems

INDEPENDENT STUDY

- HTML, CSS, and JavaScript for Web Developers - Coursera [Certificate]
- Python Specialization - Coursera [Certificate]
- Machine Learning - Coursera [Certificate]