Himani Madan

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Education

University at Buffalo, The State University of New York August 2022 – December 2023
Master of Science in Computer Science *Estimated GPA - 3.7/4.0*
- Courses: Distributed Systems, Computer Security, NLP, Machine learning, Algorithms, Data Intensive Computing

Maharshi Dayanand University August 2014 – May 2018
Bachelor of Technology in Information Technology *First Division - Top 5%*

Technical Skills

Languages & Frameworks: C#, SQL, Core Java, Javascript, .NET, Angular, Python, Go, Unit testing, Typescript
Tools: Git, Azure Service Bus, Redis, Jira, Splunk, VS Code, Visual studio, Goland, Pycryptodome, Agile development
Machine Learning: Keras, PyTorch, Scikit-Learn, spaCy, NLTK, NumPy, Pandas, HuggingFace, LLM

Work Experience

Software Engineer Intern June 2023 – August 2023
CBRE *Dallas, Texas, USA*
- Constructed a budget forecasting model by employing XGBoost regressor, Random Forest regressor, and Neural networks on Asset data, resulting in an R-square value of 89%
- Integrated Google Maps into Angular, leveraging Regrid, Local Logic, and OSM data and APIs to implement a robust scoring mechanism for identifying prime real estate locations based on demographic factors, thereby enhancing user decision-making

Senior Engineer September 2021 – August 2022
Nagarro *India*
- Constructed Azure Topics in multiple services to interact with main service working for granting funds to charity
- Developed HTTP interceptors, and multiple filter grids in Angular to process large volumes of records efficiently and used Lucene indexes and advanced search algorithms to improve the performance of grids by 76%
- Led the migration effort, upgrading the front-end from Angular 4 to Angular 8 and the back-end from .NET Core 2.2 to .NET 5, resulting in improved performance and maintainability.

Senior Software Developer January 2018 – September 2021
Quovantis Technologies (acquired by Emids) *India*
- Devised advanced transactional capabilities in financial software with a total value of EUR 17 million, transaction reversal functionality leveraging Azure Queues, and accurate invoicing information with zero transactions error
- Developed a REST API utilizing .NET Core for a healthcare product, serving over 100,000 patients and includes features such as integration with a Redis Cache, email functionality, and generation of precise PDFs
- Improved existing and constructed new T-SQL stored procedures, functions, and views on Microsoft SQL Server that replaced LINQ in the project and increased the performance of the application by 11%

Academic Projects

Clickbait Detection and spoiler generation
- Evaluated various diverse deep learning and NLP methods (RoBerta, Bert, LSTM) for clickbait detection across multi, passage, and phrase contexts, achieving a 71% F1 score. Employed T5-based question-answering mechanism to generate spoilers, attaining a 55% BLEU score for phrases, 89% for passages, and 81% for multi-context

Raft algorithm in distributed systems
- Implemented Raft algorithm for node leader election and log replication in a distributed environment with Golang. It is based on research paper https://raft.github.io/raft.pdf and used in databases such as CockroachDB

Chandy Lamport Algorithm for distributed Snapshots
- Developed an algorithm in Go for recording consistent global state in an asynchronous system, directly inspired by the principles outlined in the Chandy-Lamport paper. https://lamport.azurewebsites.net/pubs/chandy.pdf

Achievements

2021 Secured second rank among 1300 students with silver medal in Big Data computing on national level and in top 5 percentile among 300 students with gold medal in Descriptive Statistical Analysis with R