Tushar Malik

+15519985401 | tushmalik09@gmail.com | tushar-malik-75806317a | github.com/maliktush

Education

New York University-Graduate School of Arts and Sciences Jan 2021- expected Dec 2022
Master of Science, Computer Science *CGPA:3.67*

Delhi Technological University(Formerly known as Delhi College of Engineering) August 2016 – July 2020
Bachelor of Technology, Computer Science and Engineering *CGPA: 8.36/10*

Technical Skills

Courses: Data Structures, Algorithm Design and Analysis, OOP, Operating Systems, DBMS, Computer Architecture, Machine Learning, Artificial Intelligence, Theory of Computation, Compiler Design,Computer Networks, Software Design and requirements, Distributed Systems, Information and network security, Data Warehousing and mining, Information and network security, Big Data Analytics, Natural Language Processing
Programming Languages: C, C++, Java, Python, Scala
Databases: MySQL, Graph SQL
Machine Learning: Reinforcement Learning , Natural Language Processing, Neural Networks, Scrappy, Numpy, Pandas, Keras
Operating Systems: Windows, Linux, MacOS

Professional Experience

Software Engineer August 2020 – August 2021
Optum (United Health Group) *Bengaluru, India*

- Designed GSQL queries and UI for graph connectivity tracker project which determined how well connected the various entities are in the healthcare graph.
- Built spring boot application in java to support list, set and map data types in the healthcare graph and tested its functioning
- Implemented and executed scala intake code to delete close to 50M redundant and unwanted records in the datalake.
- Compared janus-graph database and tigergraph database end-to-end by writing queries, building api and designing intakes for a comprehensive analysis.

Data Science Intern June 2019 – July 2019
Optum(United Health Group) *Bengaluru, India*

- Developed a medical Provider-Member Recommendation system.
- Implemented and expanded various machine learning algorithms such as clustering,classification and neural networks to predict a provider for our members using various factors such as type of disease, distance from provider, gender etc.
- Calculated the accuracies of the various techniques used using a customized metric.
- Executed and tested several data completion techniques to drive consistencies in the incomplete raw data set resulting in high quality data for implementation of algorithms

Android App Development Intern June 2018 – July 2018
Anvay Technosolutions Pvt. Ltd,Delhi *Delhi, India*

- Designed and built an android App for mBazarr, a next generation eCommerce Startup recognized by Startup India. The app was based on Seller Buyer Relationship and contained various features such as sort by category, sort by price ,online payment among others

Projects

Ontology Driven Software Development for Automatic Detection and Updation of Software Requirement Specifications

- Presented ontology driven software development approach for automatic detection and updation of Software Required Specification (SRS).
- The research paper is published at the Journal of Discrete Mathematical Sciences Cryptography (JDMSC).
- Selected a case study on Result Management System (RMS) for DTU, which clearly shows that the proposed research approach automatically detects the outdated requirements when the updated and old version of SRS ontologies are compared. As a result, the requirements that were added, deleted, or modified were identified and documented.
- To automatically reflect the updated requirements, BrowserView (OWLDoc) plugin of protégé software was used which converted the updated SRS ontology into its HTML equivalent, which serves the purpose of updated SRS.

Cricket Runs Predictor | *Python, Pandas, Numpy, Matplotlib,*

- Innovated and implemented a run predictor for a player (Virat Kohli) by including in its design many parameters such as the opposition strength, type of bowler, condition of play, the over number in which he starts his innings etc.
- Our method delivers 20 percent more accuracy in the graphs plotted and metrics than the standard method, which uses a simple average of the play.

Tennis Virtual Coach | *Python,Pandas, Numpy,image processing*

- Designed an end-to-end application to guide anyone starting to play lawn tennis using ML techniques such as k-nearest neighboor and neural networks and image preprocessing
- The application analysed and corrected the body positions for various shots by comparing with legendary real world players.