ADITYA MATHUR

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Education

THE UNIVERSITY OF TEXAS AT DALLAS, Richardson, Texas   Expected May 2021
Master of Science in Computer Science, **GPA 3.66/4**.

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, Delhi, India   May 2019
Bachelor of Technology in Computer Science and Engineering, **GPA 8.32/10**.

Work Experience.

Software Engineer Intern, Defense Research and Development Organization, Delhi, India   Jun 2017 – Aug 2017
- Worked in Defense Terrain and Research Laboratory and implemented Risk Analyzing tool. The tool identifies the areas with higher probability of a disaster.
- Used MCDA approach and Euclidean distance method to implement the algorithm and made an android application for the same. The application calculates the probability of a risk with 87% accuracy.

Projects

Multi-Dimensional Search   Jun 2020 – Jul 2020
- Implemented a search algorithm like the ones used in e-commerce websites, having thousands of products with unique ID, price and description of its own.
- Organized the data using TreeMap and obtained insertion, deletion, searching, modifications and sorting operations using HashMap and TreeSet. The algorithm performs said operations on hundreds of thousands of entities within seconds.
  Skills used: Java, Data Structures.

Stock Exchange Web Application   Mar 2020 – Jun 2020
- Created a stock exchange web application that allows users to buy and sell stocks. Developed a scalable 3-tier responsive web application based on SOA principals.
- Also developed backend RESTful APIs for stock trading, user profile management and bank transactions. Made asynchronous AJAX calls to Stock brokerage web services for fetching data.
  Skills used: HTML, CSS, Ajax, PHP, JavaScript, jQuery.

B+ Tree Indexing   Jan 2020 – Feb 2020
- Implemented B+ Tree Indexing that reads a text file containing data and builds the index, treating first n characters as the key. The program supports basic functions like creating an index file, finding a record by the key, inserting new text record and list sequential records.
  Skills used: C++.

Library Management System   Dec 2019 – Jan 2020
- Created a Java based GUI application for library management system to maintain records of book issue, book return from student, Stock Maintenance, Catalog and book search to be computerized.
- The GUI of application was made using Swing framework and the data was maintained in a MySQL database.
  Skills used: Java, Swing, MySQL.

Comparing accuracy of SVM, CNN and ANN on an Image Dataset   Oct 2019 – Nov 2020
- Compared the accuracy of SVM, CNN and ANN to identify human emotions on Kaggle fer 2013 dataset.
- Results obtained showed that CNN has the highest accuracy of 91%.
- Further optimized the parameters of learning model and achieved high accuracy of up to 94%.
  Skills used: Python, Machine Learning, SVM, ANN, CNN.

Technical Skills

Languages	: Java, C, C++, Python.
Web Technologies	: HTML, XHTML, CSS, Bootstrap, PHP, AJAX, JavaScript.
Operating Systems	: Windows, MS DOS.
Databases	: MySQL, MongoDb.
Frameworks & Tools	: React, Node.js, jQuery, Bootstrap, Keras, Git.