

# ADITYA MATHUR

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## Education

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

Expected May 2021

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

May 2019

## Technical Skills

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

## Work Experience.

**Full Stack Developer Intern**, Newgen Software, Delhi, India Jun2018 – Aug 2018  
Worked as an intern to build a internal tool aimed to help employees file and keep track of miscellaneous expenditure for reimbursement purposes.

**Software Engineer Intern**, Defense Research and Development Organization, Delhi, India Jun2017 – Aug 2017  
Worked in Defense Terrain and Research Laboratory and implemented Risk Analyzing tool which identifies the areas with higher probability of a disaster. Implemented the same application using MCDA and Euclidean distance method.

## Projects

### Multi-Dimensional Search

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

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

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

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

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