

# DARSHAK DEEPAN RAIRAKHIA

Dallas, TX . (682)-556-2681 . [darshakrairakhia123@gmail.com](mailto:darshakrairakhia123@gmail.com) . <https://www.linkedin.com/in/darshak-rairakhia/> . <https://agitated-knuth-db3679.netlify.app/>

## SUMMARY

Analytical and Motivated Software Engineer professional with academic and technical expertise in Web Development, Data Mining, Operating Systems, and Machine Learning. Seeking full-time opportunities as a software engineer or a full-stack developer.

## WORK EXPERIENCE

### Software Engineer Intern

June 2020 - Present

University of Texas at Arlington

- Developed a tool to generate Single Fault Failures for logical expressions using Java.
- Responsible for adding CRUD functionalities to a Web application which provides service of education for virtual education.
- The tech stack used to build this application is Php and Laravel with a SQL database and React for front-end.

### Summer Intern

May 2015 - June 2015

Nelco Ltd., Mumbai, India.

- Built a web interface for the backend database using HTML, CSS, and PHP for the VSAT technology team.
- Validation for front-end was achieved using HTML and JavaScript while back-end validation was achieved using PHP.
- Studied and analyzed different types of VSAT antennas. Created a full-fledged report of the project for the client.

## ACADEMIC PROJECTS <https://github.com/Darshak1997>

### URL Shortener <https://github.com/Darshak1997/url-shortener>

September 2020

- Given any URL, this system shortens and returns a globally unique alias of that URL back to the user.
- Used Node.js for backend, React for frontend, MongoDB as to store the URLs and Redis to cache the shortened URLs.
- Using LRU caching policy, this system can save a lot of read operations to the database making the system faster.

### Campgrounds Website <https://github.com/Darshak1997/WebDevelopment>

May 2020 - June 2020

- Built a full-stack application called Yelp Camp. The technologies used are HTML, CSS, JavaScript and Node.js.
- All the campgrounds and comments on a post has CRUD operations with access control.
- Routing is achieved using RESTful APIs and the database used for storing is MongoDB. Used PassportJS for authentication.

### Chat Application <https://github.com/Darshak1997/Chat-Application>

January 2020 - March 2020

- Exploring Multi-Threading and socket module by creating a chat application with a single server and **7 clients**.
- Clients can either unicast the message, multicast it, or broadcast the message by posting messages on the GUI.
- Clients receive messages with proper time stamp and name of the sender, all this was accomplished using Python.

### Movie Search Engine <https://movie-mining-engine.herokuapp.com/>

September 2019 - November 2019

- Developed a full-stack application that used Python for backend, JavaScript for frontend and Flask for communication.
- Phase 1 Included text-search which searched for movies using tf-idf formula to rank 10 related movies to a given user query.
- Phase 2 Included Genre Classification which used Naïve Bayes Classifier to classify the movie with respect to a user query.
- Phase 3 Included Image captioning which generated the caption using Inception V3 model and search the related image.

### Heap Management <https://github.com/Darshak1997/Heap-Management-Strategies>

October 2018 - November 2018

- Implemented a library that interacts with the operating system to perform heap management using C and Linux.
- Analyzed which method is the optimal way to store a block of data using memory management algorithms which are first fit, next fit, and best fit. Parameters for analyzing the best strategies are reusing free block of data, amount of coalescing, speed.

## EDUCATION

- **University of Texas at Arlington**, Arlington, Texas

August 2018 - May 2020

MS in Computer Science and Engineering

GPA: 3.5

**Relevant Coursework:** Data Mining, Software Testing, Machine Learning, Distributed Systems, Operating Systems, Data Analysis Techniques, Analysis of Algorithms, and Web Data Management.

- **Mumbai University**, Mumbai, India

August 2014 - June 2018

Bachelor of Technology in Electronics Engineering

## SKILL SET

**Languages/Systems:** Python, C, Java, JavaScript, C#(.Net), Shell Scripting, MySQL, Apache Kafka.

**Web Technologies:** HTML5, CSS3, PHP, Laravel, Node.js, ExpressJS, jQuery, RESTful, React, ASP.NET Core.

**Data Science:** NumPy, Pandas, Matplotlib, Scikit Learn, TensorFlow, NLTK.

**Databases:** SQL, MongoDB, Redis

**Tools:** Jupyter Notebook, Spyder, Eclipse (JUnit, JaCoCo), Atom, PyCharm, Visual Studio Code.

**Platforms:** Ubuntu, Windows, Arduino, Raspberry Pi.

## ACTIVITIES

- Participated in Hackathon and built a movie recommendation website where our team was placed among the top 5 teams.