RAVI PUSHKAR

Zanskar Hostel, IIT Delhi, Delhi, India, Pin Code-110016

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ACADEMIC DETAILS

Institute	Degree/Board	CGPA/Marks(%)
Indian Institute of Technology, Delhi	B.Tech and M.Tech in Mathematics and Computing	**8.541**
Plus Two Rahika High School, Madhubani	BSEB	**76.2%**
Indian Public School, Madhubani	CBSE	**10.0**

EXPERIENCE

NatWest: *Risk Quants Analyst Intern (NWG Head Start Program)* [May, 2022 - July, 2022]
- Developed techniques to obtain estimates of fixed decay parameters lambdas for various tenor points in NSS model
- Used **NSS functional regression** using different cut-off points for tenors and compared smoothed vs unsmoothed data
- Compared and Contrasted the results and obtained a new pair of *optimized lambdas* for all long tenors along with two short tenors

GreenMo Technologies:*Software Development Intern* [June, 2021 - July, 2021]
- Worked as a member of the founding technology team and developed *Technology framework for Online EV Marketplace*
- Conceived and wrote back-end logic and database queries for numerous Rest APIs related to vehicle discovery platform
- Used **Spring** framework to develop the **APIs, MySQL** for database management, and **JUnit** test framework for unit testing

PROJECTS

Multimedia Search Engine: *Multimedia Systems Project(Prof. Brejesh Lall)* [Mar, 2022 - Apr, 2022]
-Developed a Text-based search engine using **TF-IDF** and **Word2Vec** algorithms to output articles that are closest to input text
-Developed Image-based search engine using **SIFT** & **KNN** algorithms that finds images visually closest to the input image

Meme Classification: *Data Mining Project(Prof. Niladri Chatterjee)* [Apr, 2021 - May, 2021]
-Classified an image with its text into a troll or hilarious meme or none, using *transfer learning methods* for classification
-Used **TextBlob** to get polarity and subjectivity of each text and trained a *RandomForestClassifier* model using these feature vectors
-Created a **keras** model that took two inputs(image and text inputs) and used keras text models to learn embedding of the text

Operating System Utilities: *Operating Systems Project(Prof. Ashutosh Rai)* [Mar, 2021 - May, 2021]
-Built a UNIX like **shell** in C that interactively accepts inputs from the user and supports commands like ls, cd, mkdir, history
-Designed custom version of **memory allocator** in C having its own malloc() and free() command along with heapinfo() function
-Implemented a paging and disk swapping system in C and compared different strategies: *FIFO, LRU, OPT, RAND, CLOCK*

Student Records Database: *Data Structures & Algorithms Project(Prof. Subodh Kumar)*[Sept, 2019 - Oct, 2019]
-Implemented **hash tables** that support efficient insert, search and delete operations for storing and updating student records
-Implemented and compared two techniques for collision-resolution: **double-hashing** and **separate chaining** using **BS** trees

E-commerce platform: *Data Structures & Algorithms Project(Prof. Subodh Kumar)* [Aug, 2019 - Sept, 2019]
-Designed catalogue and inventory for buyers and sellers using **LinkedLists** and **Priority Queues** with thread-safe operations
-Used **multi-threading** with each seller and buyer having individual threads for asynchronous inputs from the users

TECHNICAL SKILLS

Programming Languages: C++, Python, C, Java, MATLAB
Software Tools and Frameworks: LaTex, Git, TensorFlow, Keras, NumPy, Pandas, NLTK

COURSES DONE

Data Structures, Analysis and Design of Algorithms, Probability and Statistics, Operating Systems, Data Mining, Financial Mathematics, Multimedia Systems, Discrete Mathematics, Optimization, Cryptography, Linear Algebra

POSITIONS OF RESPONSIBILITY

Executive, Office Of Career Services(IITD): [Apr, 2019 - Sept, 2019]
-Coordinating with a team of 20 students for facilitating internship and placement involving 250 companies
Team Head, Tryst:*North India's biggest Tech Fest* [Oct, 2018 - Mar, 2019]
-Successfully executed 75 national level workshops over 3 days, with over 6000+ participants from 650 campuses
-Conceptualized and executed 8 guest lectures from various prominent personalities from the startup world

EXTRA CURRICULAR ACTIVITIES

AINA: Weekly teaching program **Srijan** in a Munirka basti/slum near IIT Delhi for the holistic development of kids
SWADESH: Rural exploration trips to various places in India to experience the society and cultural heritage of India