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SAKSHI SUMAN

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GitHub | LinkedIn | Portfolio

CAREER OBJECTIVE

A computer scientist, mathematician and a Software Engineer solving complex challenging problems for 2+ years. Looking for a long-term career in research-oriented roles in the field of Machine Learning and Data Science.

EDUCATION

- M.S. in Applied Mathematics (Machine Learning and Data Science), Northeastern University, Sep 2021 – Present.
- B.Tech. in Computer Science Engineering, REVA University, Jul 2015 – Jun 2019. GPA: 8.55/10.
- **Coursework:** Data Structures & Algorithms, Databases, Operating Systems, Computer Architecture, Discrete Mathematics, Calculus, Applied Linear Algebra, Probability, Mathematical Modeling, Graph Theory.

SKILLS

- Python; Java; C++; C; SQL; MATLAB; HTML; CSS; TypeScript; XML; JSON; Visual Basic.
- tensorflow; keras; PyTorch; scikit-learn; NumPy; SymPy, pandas; matplotlib; Spark; HBase; HIVE; HDFS; OpenCV; MongoDB; PostgreSQL; MySQL; Angular; JUnit; pytest; JMockit; Git; Jupyter Notebook; Linux; IntelliJ IDEA; PyCharm; Docker; Excel.
- Regression, Classification, Deep Neural Networks, Clustering, Computer Vision, Natural Language Processing.

EMPLOYMENT

Software Engineer – Machine Learning **Pelatro Solutions Pvt. Ltd.** **Jun 2019 – Jun 2021**

- Predicted Next Best Action for an Offer Generator using K-Means Clustering with a 61 % average chance of achieving the intents.
- Adapted Tesseract OCR's code, to increase accuracy in text-recognition for screen fonts from 50 % to 95 %.
- Optimized the duplicate row detection algorithm using a probabilistic approach and reduced time complexity from $O(n^2)$ to $O(n)$.
- Worked in technical teams in development, deployment with product managers to formulate data analytics problems.

Machine Learning Intern **Walkter Beacon Lab Pvt. Ltd.** **Jan 2019 – May 2019**

- Automated resume matching process using a word count model and decreased the time spent by recruiting by ~ 80 %.
- Performed sentiment analysis on user ratings for organizations and developed a smart scoring algorithm for work happiness.
- Designed an efficient data structure for user visit logging and calculation of user retention rate. Automated email system for ATS.

Teaching Assistant **Northeastern University/REVA University** **Spring/Fall 2018, Fall 2021**

- Courses: Mathematical Foundations of Computer Science I & II, Matrix Methods in Data Analysis and Machine Learning.
- Promoted to Head TA in Fall 2018; led weekly meeting and supervised four other TAs.

PROJECTS

- **Image classifier for the SVHN dataset:** Built a CNN classifier model with 3 convolutional layers and 2 fully connected layers for digit recognition on street view images. Applied MaxPooling, BatchNormalization, Dropout and Early Stopping callback techniques to increase the accuracy on validation data to 89.55 %.
- **Transfer learning for pet classification:** Used pretrained MobileNet V2 model (trained on ImageNet dataset) as a feature extractor and trained additional new layers to classify cats and dogs. Applied freezing on pretrained layers and replaced last layer to achieve a classification accuracy of 99 %.
- **Character-level language modeling:** Built a character-level text generation model using an RNN to study patterns from a dataset of 1,536 dinosaur names and generated new names. Applied sampling technique to learn probability distribution of next character.
- **Movie rating prediction using Matrix Factorization:** Derived update rules for Weighted Alternating Least Squares and predicted missing user ratings for MovieLens data to achieve a 62 % better MSE performance than baseline model.
- **Northeastern NEWS Updater:** Developed a Google Chrome extension to get instant notification updates from NEWS @ Northeastern portal using JavaScript, AJAX, HTML, and CSS. Was awarded a merit scholarship of $ 14,000.

RESEARCH

- Published a research paper – Classification of land cover using Data Analytics for Hyperspectral Imaging in IACIT 2019 and got approved in journal: IJCSE, E-ISSN: 2347-2693 (URL: https://www.ijcseonline.org/spl_pub_paper/72-IACIT%20-%20295.pdf).

EXTRA ACADEMIC ACTIVITIES

- Mentor at **Girls' Angle**, a math club supported by Google that provides comprehensive approach to math education for girls.
- Attended WomenHack – Boston Conference on Aug 26th, 2021 and networked with several companies and leaders.
- Recipient and attendee of Grace Hopper Conference (vGHC) – 2021 student scholarship.
- Member of IEEE computer society, student branch and volunteered at the IEEE International Smart Technologies, Bangalore, 2017.
- Solved 900+ problems on multiple coding platforms like LeetCode, HackerRank, GeeksforGeeks, etc.,