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| +1-8572609294 | **Sakshi Suman** | [suman.sak@northeastern.edu](mailto:suman.sak@northeastern.edu) |
| 2595 Washington Street | [GitHub](https://github.com/sakshisuman12) | [LinkedIn](https://www.linkedin.com/in/sakshisuman12/) | [Portfolio](https://sakshisuman12.github.io/) |
| Boston MA – 02119 |  |

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| **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 a coupon generator application using K-Means Clustering with an accuracy of 61 %. * 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 an NLP model and decreased the time spent by recruiting by approximately 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**](https://github.com/sakshisuman12/deeplearning/tree/main/Digit%20Classifier%20-%20SVHN)**:** 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 %. * [**Character-level language modeling**](https://github.com/sakshisuman12/deeplearning/blob/main/Character%20level%20language%20modeling/Dinosaurus_Island_Character_level_language_model.ipynb)**:** 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**](https://github.com/sakshisuman12/deeplearning/blob/main/Matrix%20Factorization/MatrixFactorization.ipynb)**:** Derived [update rules](https://sakshisuman12.github.io/main.pdf#page=27) for Weighted Alternating Least Squares and predicted missing user ratings for MovieLens data to achieve a 62 % better MSE performance than baseline model. * [**Transfer learning for pet classification**](https://github.com/sakshisuman12/deeplearning/blob/main/Transfer%20Learning%20-%20Cats%20and%20Dogs%20Classifier/Transfer%20Learning%20-%20Cats%20and%20Dogs%20Classifier.ipynb)**:** Used pretrained image classifier 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 %. * [**Northeastern NEWS Updater**](https://github.com/sakshisuman12/news-at-northeastern)**:** 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., | | |