Suhas Maddali

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EDUCATION

Northeastern University, Boston, MA **Sept. 2021 - Present**
Khoury College of Computer Sciences
Candidate *for Master of Science in Data Science*
Related Courses: Supervised Machine Learning Theory, Unsupervised Machine Learning, Natural Language Processing (NLP)
VNR Vignana Jyothi Institute of Technology, Hyderabad, India **June 2015 - May 2019**
Bachelor of Technology in Electronics and Communication Engineering

TECHNICAL KNOWLEDGE

Programming Languages:	Python, R, SQL, Java, C, Matlab, MongoDB
Libraries:	Sklearn, SciPy, Numpy, Pandas, Keras, Tensorflow, Xgboost, Pytorch, Seaborn, Matplotlib
Tools Used:	Git, HTML5, CSS3, Tableau, AWS, Scala, Spark, Bootstrap, Hadoop, Office, Powerpoint
Operating Systems:	Windows, MacOS, Linux
Certifications:	Machine Learning by Stanford University, Python, Deep Learning Specialization by Andrew Ng, Data Science Bootcamp with R, Complete Tensorflow 2 and Keras

PROFESSIONAL EXPERIENCE

Research Assistant | Khoury College of Computer Sciences, Boston, USA **Jan. 2022 - Present**

- Handled **Neural Networks (NNs)** for systems and analyzed their behavior and verified them for use.
- Initiated the input and output constraints that characterize the Neural Network (NN) behaviors.
- Implemented state-of-the-art **NN-verification** tools and built certified neural networks for computer systems.

Graduate Teaching Assistant | Khoury College of Computer Sciences, Boston, USA **Dec. 2021 – Present**

- Regularly provided feedback to students and fostered an environment of open communication and interest.
- Assisted in coordinating college-wide **staff meetings** and **assemblies** for students.
- Supported each student's **social** and **emotional** development and encouraged them to pursue their curiosity and interests.

Data Scientist | Solbots Technologies Private Limited, Hyderabad, India **Jan. 2018 - Dec. 2018**

- Developed **Statistical Analysis** and **Statistical Modelling** Using Python to understand grip of bionic hand.
- Executed computer vision algorithms for image segmentation and recognition using **OpenCV** and **Matplotlib**.
- Oversaw my team in applying data analysis, data engineering and data mining methods for computer vision.

PROJECTS

Wheat Disease Detection Using CNNs and Transfer Learning **Dec.2021 – Jan.2022**

- Programmed with networks such as **VGG19**, **Xception**, **InceptionV3** and **ResNet152** to predict the diseases in wheat.
- Achieved an accuracy of **97 percent** on the cross-validation data of images of wheat. Link

Steel Defect Detection Using Deep Learning **May.2021 – Sep.2021**

- Used pre-trained models such as **VGG19**, **AlexNet**, **ResNet** and **EfficientNet** on imagenet for steel defect task.
- Build an interactive and dynamic UI and webpage with **HTML**, **CSS**, **Flask** and **REST APIs**.
- Improved the accuracy of the best model from **75 percent** to **82 percent** respectively. Link

Washington Bike Demand Predictor **Feb. 2021 - Apr.2021**

- Performed **Exploratory Data Analysis** in **Python** and innovatively added 8 new features to large, complex dataset for prediction of bike demand and explored the features.
- Employed Machine Learning Models such as **Deep Neural Networks**, K Nearest Neighbors, PLS Regression, Decision Tree, SVM, Clustering, Gradient Boosting Regression (Xgboost) and Logistic Regression. Link

Predicting the Readability of Text Using Machine Learning **Sep.2020 – Dec.2020**

- Analyzed text embedding such as **BOW**, **TF-IDF**, **Word2Vec**, **BERT** and **Roberta** for text analysis.
- Achieved a **mean absolute error** of 27 for prediction of readability of text. Link

YouTube Video Analysis **April2020 - Aug.2020**

- Conducted Exploratory Data Analysis and **Data Visualization** for identifying categories, comments and trending videos.
- Generated and delivered actionable insights to the team so that the right steps are taken to increase the business value. Link

Twitter Sentiment Analysis **May.2020 – Aug.2020**

- Analyzed the sentiment of **27481** data text points and made predictions on **3000** test points.
- Performed **text encoding**, **parsing**, **semantic analysis**, **discourse integration** and **pragmatic analysis**. Link

Car Prices Prediction and Analysis **Jan.2020 – Feb.2020**

- Predicted car prices by considering factors such as Horse Power, MPG, Vehicle Size, Transmission and Popularity.
- Accomplished a **mean absolute error (MAE)** of **3327** for the test data. Link