ROBINS YADAV

DATA SCIENTIST & MACHINE LEARNING ENGINEER

CONTACT

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EDUCATION

2020
UNIVERSITY OF ARIZONA – Tucson, AZ
Master of Science in Electrical and Computer Engineering [4.0/4.0]

2018
BOISE STATE UNIVERSITY – Boise, ID
Bachelor of Science in Electrical Engineering [3.7/4.0]

RELEVANT COURSEWORK

- Machine learning and Data Analytics
- Statistical Machine Learning
- Optimization for Machine Learning
- Data Mining of Business Intelligence
- Big Data Analytics

MANAGEMENT SKILLS

- Project and Team Management
- Trello, Git, Excel, Powerpoint

TECHNICAL SKILLS

- **Programming Languages:** Python (Scikit-learn. TensorFlow, Keras), R, SQL, Pyspark
- **Data Analysis:** Numpy, Pandas, dpylr
- **Data Visualization:** Matplotlib, Seaborn, ggplot2, Tableau
- **Big Data:** Hadoop, Hive, HDFS
- **Supervised Learning:** Linear Regression, Logistic Regression, Naïve Bayes, Decision Tree, K-Nearest Neighbors, Support Vector Machines, Neural Network
- **Unsupervised Learning:** K-means, PCA

DATA SCIENCE PROJECTS

Hotel Booking Demand - Python - Kaggle

- Developed a **predictive model-classification** which predicts booking cancellations for the hotels (which cost around 40% for the hospitality industries) by using best chosen ML algorithm **(Decision Tree)** with an accuracy of 92%.
- Performed **feature engineering** to select the important features from the dataset and **oversampling** techniques to handle imbalanced issue. Also, **cross-validation** method is used for evaluating 5 classification algorithms.

NYC Taxi Trip Duration – R - Kaggle

- Developed a **classification** model using **R** to predict "short trip" with the trip fare within $35 which helps the NYC Yellow cab company to maximize the profit by using **LDA** and **Naïve Bayes** algorithms with the accuracy 88% and 82%r respectively.

Job Salary Prediction – Python

- Developed a **predictive model-regression** to predict the employee salaries based on their information such as title, degree, experience etc. by using best selected algorithm **(Gradient Boosting)** with MSE of 357.04 compare to baseline mode of MSE of 1100.21.
- **Dimensionality Reduction – PCA** and **Grid Search** (to tune the model) were used to achieve better model performances.

Prediction for the Future HF Spectrum - Python

- Implemented **Long Short Term Memory** using **Keras** to predict the occupied/free state of spectrum occupancy from known spectrum on recorded FM signals and Mackey-Glass datasets. This was done by using **Python** with an accuracy of 86%.

EXPERIENCE

Graduate Teaching Assistant – Sup: Dr. Michael W. Marcellin
Aug 2018 – May 2020 Tucson, AZ

- **Lectured** lab topics and **taught** 300 plus undergraduate students on how to debug and test the electrical and electronic circuits using test equipment. Also, organized lab parts, graded prelab and lab reports.

Graduate Research Assistant – Adv: Dr. Ravi Tandon
May 2019 – Jan 2020 Tucson, AZ

- Researched different **quantization optimization algorithms** (QSGD, SignSGD, TernGrad, k-level Quantization) to reduce the communication bottleneck, and the computation load in a distributed Machine Learning system using **python**.

Electrical Engineering Intern | Research & Development at WMDTech Inc.
Feb 2018 – July 2018 Boise, ID

- **Prototyped circuits** and **implemented PCB layout (Altium Designer Software)** for RPAP-Robotic Precision Aiming Platform and RFD-Removed Firing Device by using breadboard and **LTspice** simulation software, and by considering customer requirements.