Sanjana Moodbagil Mallikarjuna

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EDUCATION

University of Southern California, Los Angeles, CA **May 2023 (Expected)**
Master of Science in Computer Science | *Analysis of Algorithms, Database Systems*

BMS College of Engineering, Bangalore, India **Aug 2020**
Bachelor of Engineering in Information Science and Engineering | GPA 9.32/10

SKILLS

- Languages: Python, JavaScript, Java
- Data viz.: Tableau, Excel, Matplotlib, Seaborn
- App/Web Dev: NodeJS, HTML+CSS
- DBMS: SQL server, MongoDB, NoSql
- Tools: Anaconda, Jupyter Notebook, Tensorflow, Keras, Sklearn, NLTK, Weka
- Soft Skills: Leadership, Writing, Time Management, Good Communicator

WORK EXPERIENCE

Data Analyst Intern | **Caliper Business Solutions,** Bangalore, India **Jan 2021-Jun 2021**

- Created Data Transformation models using SQL on Holistics to use data for analysis and developing ML models
- Built Analytics dashboards using SQL and Python libraries on Time Budgeting and Transporter Performance
- Performed Route Analysis on Spatial data to understand Driver behavior and Patterns in Route Taken to help companies have prior knowledge about expected stoppages, potential stoppage hubs, expected destination time etc

Technical Intern | **Caliper Business Solutions,** Bangalore, India **Feb 2020-May 2020**

- Developed a ML predictive model with a team to predict the ceiling price for daily freight buying used by companies for their transportation needs and produce a feature to buy freight at a lesser price
- The predictive model developed increased the savings on Ceiling price by **5%**

Research Intern | **Dalhousie University,** Halifax, Canada **Jun 2019-Aug 2019**

- Devised a python script on Jupyter Notebook to analyze the time series of groundwater levels and reconstruct the history of groundwater recharges to aquifers based on the nature of hydrographs.
- This approach is an improvement to the older method in terms of automating recharge and using additional new features that help generate a more accurate recharge rates and forecasts.
- Performed data analysis and signal processing of time series data using python. Presented dashboards on Tableau to show data trend, understand how various parameters affect the nature of hydrographs, and forecasts of the recharge rates

PROJECTS

Analysis of Speech Patterns in Children to Detect Depression **Spring 2020**

- Performed a comparative study between Logistic Regression, Random Forest, SVM-Gussian and SVM-Linear to identify a model that best analysis the features extracted from the audio data to identify children with depression. Random Forest gave the best performance with an accuracy of **94%**
- Applied transfer learning approach where a pre-trained WaveNet feature extracting model was used with CNN classifier that gave an accuracy of **78%.** This gives more and better input features but performs poorly due to small dataset size

Histopathological Cancer Detection **Fall 2019**

- Investigated the potential of ML algorithms to detect metastases in lymph nodes shown on body CT scan image data
- Trained models such as MobileNet, Xception, and CNN in characterizing cancerous from normal cells using Jupyter notebook with TensorFlow and got an accuracy of **90%, 75% and 90%** respectively

Credit Card Fraud Detection **Spring 2019**

• Modeling past credit card transactions with the knowledge of the ones that turned out to be fraud or not.
• Detecting fraudulent transactions while minimizing false positives
• Implemented using Logistic Regression, Random Forest and Local Outlier algorithms on a Principal Component Analysis (PCA) dataset

Bank Marketing **Fall 2018**

• Predicted the success of telemarketing calls forselling long term deposits
• Compared the prediction accuracy between Logistic Regression, Decision Tree and Random Forest using RStudio

ACHIEVEMENTS & LEADERSHIP

- Organized coding and debugging competition for college technical fest at BMS College of Engineering
- Volunteered for publicity team for college fest
- Part of the Women Basketball team at BMS College of Engineering
- Volunteered to teach visually impaired children at Samarthanam Trust for the disabled, Bangalore, India
- Selected for **Mitacs Scholarship** to participate in a research internship at Dalhousie University, Canada - One among four selected from Fall 2020 batch