Naveen Virincheepuram

+1 (812) 671 4673

naviri@iu.edu | naveen.v.nithya@gmail.com | linkedin.com/in/naveen-virincheepuram

TECHNICAL SKILLS

Languages & Tools: Python · R · SAS · MATLAB · Julia · Google Cloud Platform · Tableau · Google Colab · Jupyter Notebook · Jenkins · MS SQL · Postgre SQL · BigQuery · Teradata

Projects: Design of Experiments · Clustering · Classification · Regression · Forecasting · Anomaly Detection · Feature Selection and Engineering · Exploratory Data Analysis · Cloud Engineering · Signal Processing · Game Theory · Computer Vision · Neural Networks · Social Media Mining · CI/CD Pipeline Automation ·

PROFESSIONAL EXPERIENCE

Mu Sigma Business Solutions, Bangalore, India **Work Experience: 3 Years**

Decision Scientist

Client: Financial Planning and Analysis (FP&A) Team – Retail | Fortune 100 **[Sept 2016 – Aug 2019]**

- Collaborate with other data scientists to build an org-wide campaign measurement framework across customer segments by Design of Experiments and orchestrate analytical workflow across various Google Cloud Platform products in CI/CD environment using Jenkins – acquired methodology includes state-of-the-art machine learning and statistical techniques for anomaly detection, customer profiling, test-control selection and causal impact analysis
- Lead a team of seven data scientist and provide R&D support to enhance test vs. control selection methodology for picking the right samples suitable for testing a new campaigns, thereby increasing the reliability of a pre-existing campaign measurement enterprise-level framework
- Reduce the turn-around time of critical cloud-based Tableau reports by 70% and improve storage efficiency through cloud engineering, migrating, and automating complex analytical workflows from SAS to Python

Client: Various Teams – Energy, BFSI, Retail, Pharma | Fortune 100

- Enable text mining capabilities for an energy giant through topic modelling and sentiment analysis for efficient handling and analysis of customer feedbacks consolidated from e-mails and social media streams
- Engineer a fraudulent claim detection methodology for an insurance company through incorporating contextualized business rules, feature extraction and classification modelling with a 90% model accuracy
- Assess business problems for multiple client teams across business verticals and ideate analytical approach through design sprints around stated use cases to capture and measure client's KPIs through data modelling

SPOTLIGHT ACADEMIC PROJECTS

Technologies Used: Python (numpy, pandas, scipy, scikit-learn, keras, tensorflow 2.0, librosa, PIL, beautiful-soup, matplotlob, seaborn)

Artificial Intelligence: **Fall 2019**

- Program an AI to win humans with game theory using Expectiminimax algorithm, game settings identical to 1024 game
- Implement Decision Trees based classification model with an accuracy of 80% for automated image orientation and decipher encrypted messages with using Hidden Markov Models

Machine Learning for Signal Processing: **Spring 2020**

- Source separation: Separate different types of noises from sources implementing ML based techniques like ICA, PCA, NMF and neural networks - all developed from scratch
- Probabilistic Clustering: Built a GMM based approach to separate the datapoint based on discriminant factor

Computer Vision: **Spring 2020**

- Conduct a comparative study of performance of Non-ML and ML based techniques for detecting objects in image samples. Implement a Deep Learning model (based on Facebook's AI) and achieved 83% accuracy
- Developed a Non-ML based object detection approach using Hough Transform, Otsu transform and Non-Maximum Suppression for Optical Music Recognition to recognize musical notes from staff images

Deep Learning: **Fall 2020**

- Denoise audio signals using RNN, CNN, FNN (w and w/o dropouts) and network compression using SVD

Social Media Mining: **Fall 2020**

- Twitter scraping and gender identification using lexical characteristics- implement pipelines in sklearn employing TF-IDF + Naive Bayes + Topic Modelling to find topical interests among social media data using supervised machine learning
- Presented research papers on Author Attribution and Gender Identification from Linguistic Features using NLP

EDUCATION

Indiana University, School of Informatics, Computing and Engineering **[Aug 2019 – May 2021]**

Master's in Data Science – Residential

(Statistical Foundations, Exploratory Data Analysis, Big Data Management, Machine Learning, Artificial Intelligence, Deep Learning, Social Media Mining, Computer Vision, Data Visualization)

Anna University, Sri Sairam Engineering College **[Aug 2012 - April 2016]**

Bachelor of Engineering, Civil Engineering

(Linear Algebra, Multi-variate calculus, Fourier Transforms, Probability)