MANASI SWAMINATHAN

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EDUCATION

INDIANA UNIVERSITY Bloomington, Indiana; May 2023
Master of Science, Computer Science
Related coursework: Deep Learning Systems, Elements of AI, Algorithms, Machine Learning, Data Mining, Scala, Spark

RAJALAKSHMI ENGINEERING COLLEGE Chennai, India; May 2021
Bachelor of Technology, Information Technology
Cumulative Grade Point Average: 8.53 out of 10; Awarded First Class with Distinction

EXPERIENCE

AMTEX SYSTEMS Chennai, India
Intern May 2019 – June 2019
- Collaborated with team in iMahila, a digital platform for empowering self-help group of women with skills for financial independence
- Developed a dashboard page for tracking the course progress using Javascript and CSS

CONSOLIDATED CONSTRUCTION CONSORTIUM LIMITED (CCCL) Chennai, India
Intern Oct 2019 – Dec 2019
- Contributed to re-engineering the company's outdated ERP software built with visual basics
- Built the Database Schema from the existing database in SQL that was then documented
- Defined the database requirements for SAP ERP

SWINBURNE UNIVERSITY OF TECHNOLOGY Melbourne, Australia
Foreign Technical Training Program Dec 2018 – Jan 2019
- Conducted surveys for the development of smart cities and researched waste management and recycling methods as a part of design thinking
- Analyzed the learnings to design a product called iBin, an internet driven automated system for waste recycling and collection for India
- Inspired by the BigBelly bins and the current Industry 4.0 technologies like IoT and Cloud Computing

ACADEMIC PROJECTS

Comparison of Deep Learning Methods for EEG-Based Brain Computer Interfaces Dec 2021
- Comparing the performance of Bi-LSTM, CNN+GRU, CNN and Multi-layer CNN models using transfer learning within motor imagery paradigms.
- Implemented data augmentation on selected EEG samples to avoid overfitting on our limited dataset.

Capstone Project: Data Analytics Model to Augment the Growth of Tourism Industry March 2021
- Performed web scraping using Selenium for tourism reviews of famous destinations in India.
- Implemented sentiment analysis of tourism reviews of major tourist destinations using deep learning algorithms like LSTM and GRU and compared of the two models with 80% and 89% accuracy respectively
- Built forecasting, seasonality and trend analysis models using ARIMA, SARIMA, Prophet and Holt Winter's exponential smoothing and performed comparative study of models.
- Developed Tourism prediction model and performed comparative study of models like GRU, LSTM, RNN, CNN and DNN

Comparative Study of Various Algorithms for Time Series Forecasting in Stock Market Nov 2020
- Studied and compared various time series algorithms models like Regression, kNN, ARIMA, Prophet and LSTM for stock price prediction for Tata Global Beverages
- Reported the learnings based on the RMSE value of the models.

Visualizing and Predicting COVID-19 Cases Dec 2020
- Performed geospatial analysis and analyzed the dataset using visualization libraries like Plotly and Geoplotlib
- Enhanced the project by building a predictive model using SVM

Vehicle Surveillance Application using Image Processing Jan 2020
- Created a model using CNN with 90% accuracy for processing number plates of vehicles in residential societies, business complexes and parking spaces for identification and monitoring through Road Transport Office and local database
- Connected with the SMS API for notifying the users

TECHNICAL SKILLS

Certificates: Design and Analysis of Algorithms – NPTEL; Machine Learning – Coursera**;** Tools for Data Science – Coursera
Language: Python, SQL, C, R, Javascript, HTML, CSS
Framework/Packages: NumPy, Pandas, Keras, Tensorflow, PyTorch, scikit-learn, Matplotlib, Plotly, Tableau, Selenium