

# VINAY SAMMANGI

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in VinaySammangi

## EXPERIENCE

### DATA SCIENTIST @ Aditya Birla Group

📅 Apr'18 - Jul'21

#### Price Forecasting (\$4M)

- Led a team in engineering highly relevant features affecting the prices using web-crawling, fundamental and technical analysis
- Forecasted prices with only **1% MAPE** using univariate and multivariate regression models that could work in uncertain market conditions
- Built robust classification models to predict the price movements with **100% accuracy** that provided confidence to the price forecasts

#### Industry 4.0 (\$1M)

- Deployed a meta-learning model to predict the temperature spikes in a smelting process and provide recommendations for process control
- Solved quality improvement problems by identifying the root causes leading to process failure using anomaly detection, prescriptive modeling, time-series clustering, model-based optimization methods

### DATA ANALYST @ Meru & Ola

📅 Jul'17 - Mar'18

- Identified the behavior of each customer using clustering analysis
- Predicted expected job time of a driver using ensemble models
- Implemented A/B testing to find the ideal mode of communication to the customer for either discount or dynamic fares
- Extracted features from the driving license using Image Processing

### DATA SCIENCE INTERN @ Innoplexus

📅 May'16 - Jul'16

- Created a binary document classifier on the IMDB and PubMed data
- Used Web scraping techniques to automate the ETL processes by extracting **15 TB** of data from 60 different pharmaceutical websites
- Programmed a python class for parsing different file formats into JSON format and dumping them into MongoDB database

## RESEARCH

### Prediction and Prevention of Accidents

📅 Nov'15 - May'17

- Evaluated different methods for handling missing values, outliers, generating new features, determining important features
- Identified hidden semantic structures of text using LDA topic modeling
- Worked extensively on hyperparameter tuning of SVM, ANN, Decision trees, Random Forests using PSO and GA algorithms
- Compared the model performances using statistical hypothesis tests
- Proposed a novel approach to extract rules from SVM and RF models
- Obtained predictive regions of large text data using CNN and developed the safety measures using Association Rule Mining
- Published **three journal papers, three conference papers** from this project

### Real-Time Health Prediction System

📅 Jul'16 - Apr'17

- Developed an android application that takes static and dynamic inputs from the worker and predicts their health rate
- Collected the dynamic data from worker (heart rate) with the help of ICT based data capture system into the android application
- Deployed a BPNN model in the app to predict real-time health rate

## EDUCATION

### GEORGIA INSTITUTE OF TECHNOLOGY

#### Master of Science in Analytics

📅 Aug'21 - Dec'22 (exp)

📍 Atlanta

CGPA: 4.0 | Track: Computational Data Analytics

Teaching Assistant: Natural Language Processing

### INDIAN INSTITUTE OF TECHNOLOGY

#### B.Tech in Mechanical Engineering

📅 Jul'13 - May'17

📍 Kharagpur

## SKILLS



## COURSEWORK

Natural Language Processing | Deep Learning | Machine Learning | Regression Analysis | Data & Visual Analytics | Graphical Models in ML | Time Series Analysis | Data Analytics in Business | Analytical Modeling | Computing for Data Analysis

## PROJECTS

- Developed a BiLSTM-CNN-CRF model for named entity recognition problem with 90.5% F1 score
- Implemented an encoder-decoder architecture with attention mechanism on dialog corpus
- Built an ensemble model comprising DistilBERT and Ridge to predict the degree of toxicity of social media comments with 85.3% accuracy
- Implemented a Convolutional Neural Network model on IMDB reviews with 87.2% accuracy.
- Forecasted 28 days ahead daily Walmart sales data at different hierarchies with 0.72 RMSSE
- Developed a content-based recommendation engine on Netflix movies and TV shows data

## LEADERSHIP

### Team Head @ Child Rights and You (CRY)

- Led a team of 15 to enroll school dropouts, create interactive audiovisual courses, pilot Right to Education and Health at over 200 households.

### Hockey Secretary @ Patel Hall, IIT Kharagpur

- Managed and represented a team of 20 players for the Inter Hall Hockey Competition