**KAVINKUMAR RAMASAMY MURTHI**

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**EDUCATION**

* **MS in Data Analytics**, ***Penn State University***, Malvern, PA, Dec 2019, GPA-**3.90/4**
* **BE in Industrial Engineering**, ***Anna University***, Chennai, April 2018, GPA- **3.28/4**

**TECHNICAL SKILLS**

* Programming language: Python, R, C++, C
* Statistics: linear Geometry, Hypothesis testing, Eigen computations, Distributions, Graphical Inference.
* Machine Learning techniques: Supervised, Unsupervised, Semi Supervised, Text Analytics, NLP
* Deep Learning: ANN, CNN, LSTM, RPN, GAN’s, Hybrid Branched NN (Platform: TensorFlow, Keras, Pytorch)
* Data Handling and Big data Tools: Oracle Database, SQL server, Hadoop, Hive, Pig
* Cloud system: AWS, Salesforce, GCP
* Other Tools: Minitab, KNIME, Excel, Tableau, PowerBI

**WORK EXPERIENCE**

**Research Assistantship, *Pennsylvania State University,*** January 2019 – May 2019 (5 months)

Enhanced the accuracy of the model about 12% by employing a varied method of hyperparameter tuning using Gradient descent algorithm on polynomial equation. The model was built for google chromium’s technical debts severity detection problem, where I implemented LightGBM model and deployed my own hyperparameter tuning on them

**Independent study, *United Airlines,*** January 2019 – April 2019 (4 months)

Text classification (NLP) and analysis of ASAP reports filed by the employees of united airlines. This is a special case where each record was assigned with three levels of dependent variable with many combinations of them in each level. Generated hybrid Models for each level which were assembled in a tree for a complete output Master model. This Master model attained a partial match accuracy of 96% and complete match accuracy of 54% (<https://github.com/KavinkumarRM/Hybrid-Tree-of-models>)

**Intern, *Hyundai Motor India Limited*,** Chennai, June 2017 - August 2017 (2 months)

Performed Risk Analysis for Auto parts manufacturing house by accessing the sales database and interpreted that defects on the outgoing parts can be reduced upon employing Automatic Quality check.

**Executive CORE of SIE**, ***CEG***, April 2017 – April 2018 (1 year)

Executive Technical Core member of Society of Industrial Engineers. Responsible of organizing technical workshops and Events for the 2018 Academic year

**ACADEMIC PROJECTS**

**Recognizing Traffic signs in Real time on a car (Computer Vision)** August 2019 – December 2019

**Objective:** Detecting traffic signs in a road using computer vision. This is done by capturing the video in real time from the front cam. Employed ResNet and trained on AWS. Ultimately was able to recognize signs from a distance of 10-13 meters which would provide space for tactical feedback or any kind of actions made by the car. (<https://medium.com/@kavin.amutha.ssr/real-time-traffic-sign-detection-computer-vision-25b789787861> , <https://github.com/KavinkumarRM/Traffic-Sign-Detection---computer-vision>)

**Classification and prediction of crimes in San Francisco** January 2019 – February 2019

**Objective:** Digging in the geographical crime map and to predict the crime chain committed by individuals. Finding areas in the city where potentially more crimes can occur in near future using latitude and longitude data of the crime place.

**Brand Analysis** January 2019 – February 2019

**Objective:** This Project is for the analysis of brand performance and the factors that influences their sales. The entire brand is rated on perform, leader, latest, fun, serious, bargain, value, trendy and rebuy. (<https://github.com/KavinkumarRM/Brand-Analysis>)

**Musical Face** October 2018 – November 2018

**Objective**: Recognizing the mood of the person by their face expression using the front cam of their respective smartphone or laptop and to suggest 10 songs for their mood with an impressive 52%. This was performed by combining CNN and RNN together. CNN works as the emotion classifier for photos took from cam, and RNN works as the song classifier (<https://github.com/KavinkumarRM/Musical-Face>)

**Clustering of Twitter Health Feeds** October 2018 – November 2018

**Objective**: Clustering useful disease information over time and to predict the next occurrence of the disease on a particular time scale using twitter health feeds