# SAI SURYA SUDHA SOUNDARYA MANTHA

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## PROFILE
Enthusiast data analytics graduate student experienced in analytical problem solving across retail and finance verticals. Proven ability to work with veteran analytics teams to identify and convert business problems to arrive at statistical solutions and insights in a business consumable way.

## SKILLS
*Languages:* R, SQL, Python, MATLAB, C, Minitab
*Technologies:* Hadoop , Alteryx, MySQL, AWS
*Visualisation Tools:* RShiny, Tableau, Qlik
*Analytical Skills:* Exploratory Data Analytics, Story boarding, Statistics, BigData, Data Mining, A/B Testing, Quantitative Analysis, Data Management and Visualisation
*Machine Learning Skills:* Generalized Linear Model, Random Forest, Decision Trees, SVM, Naïve Bayes, KNN, Neural Networks, Clustering, Classification, Time Series Forecasting
*Others:* Leadership, Accountability, Interpersonal, Problem Solving and Critical Thinking

## EDUCATION
**The Pennsylvania State University**, Malvern, PA                                    December 2022
*Master of Professional Studies in Data Analytics*                                                      4/4
**Amrita Vishwa Vidyapeetham,** Kollam, Kerala                                             May 2018
*Bachelor of Technology in Electronics and Communication Engineering*                  *9.94/10*

## CERTIFICATIONS
- Microsoft Certified Azure AI Fundamentals
- Qlik Data Analytics Certification
- Machine Learning | Stanford University  -  Machine Learning by Andrew NG on Coursera

## EXPERIENCE
**The Pennsylvania State University**, Great Valley, Pennsylvania                October 2021 - Present
*Research Assistant*
- Working on COVID-19 analysis to livestream realtime interactive dashboards using Qlik and front-end technologies
- End to end pipelining and process integration of multiple sources using Cloud infrastructure helps to automate real time analytics and reduce the redundant manual efforts by 29% and increase efficiency of the project by 14.5%

**MuSigma Inc,** Banglore, India                                                      June 2018 – July 2021
*Decision Scientist* (January 2020 - July 2021)
**Dynamic Risk Assessment**
- Lead a team of 4, working with the Global Finance Team of a leading US based pharmaceutical company to assess the risk of balance sheet and reduce material mis-statement
- Designed a framework to help the R2R teams across all regions to identify and avoid mis-classification of risk of 2.2% group accounts
- The project helped the stakeholders to increase efficiency of reconciliation process and decrease manual efforts by 40%

*Trainee Decision Scientist* (February 2019 - January 2020)
**SKU Optimisation Engine**
- Assisted top 5th retailer of Asia Pacific region with reducing the Non Movement Rate by 31.6%, increasing the average order value by 11.2% and decreasing monthly manual effort by 70%
- Actively involved in various phases of the SKU optimisation and recommendation engine which include developing rule based algorithm, A/B testing phase, performance assessment, algorithm tuning and performance enhancement, scaling the project to stores across the country

*Trainee Decision Scientist* (June 2018 - February 2019)
**Global Customer Insights and Analytics**
- Supported the customer insights and analytics team for the Fortune 1 retailer in pipelining and maintaining propensity models which were used to take real time decisions by the stake holders
- Supported 'Holiday Analysis' - to analyse basket metrics and other KPIs during the holiday season to understand customer behaviour

## PROJECTS
**How ISIS uses Twitter data,** Pennsylvania, USA                                                    2021
- Performed exploratory analysis, time series analysis, text analysis and network analysis on tweets posted by ISIS fan boys to understand the key members of the community, kind of emotion spread by the tweets and analysing for the patterns in the tweets

**Data Base Management System,** Pennsylvania, USA                                                    2021
- Designed and developed a database from scratch for next gen restaurant application system to store data related to the application in ORACLE
- Data Base consists of data at staff, customer, orders, transaction levels which can be used to create applications or queried from

**Crowd and Queue management using Computer Vision,** Pennsylvania, USA                2021
- Developed object detection model to identify people from a frame identify the distance between two people notify if people are not following social distancing.
- Worked on creating an algorithm plan to detect pets and other objects from the frame
- Runner up team for the idea at iLink Digital Hackathon 2021

**Emotional Assistive Robots,** Kollam, India                                                    2017-2018
- Created face recognition, speech recognition and multi-lingual identification modules using Arduino and MATLAB
- The research work could be further developed to create and integrate EEG signals and build robots that could assist the needy

**Extraction and classification of Emotions from EEG,** Kollam, India                2016-2017
- Worked on bio signal processing using ML techniques on extracting and classifying 6 emotions in the regions of the brain using EEG signals
- The project required data collection, processing and using machine learning and validation techniques and was published in IEEE

## PROFESSIONAL ASSOCIATIONS
- Google Developer Students Club - Core team member and Technical Solutions Lead at Penn State Great Valley
- Tutor and Evaluator of 'R' at MuSigma University
- Active participant of weakly learning of technical concepts in the team

## PUBLICATIONS
"Extraction of Features from EEG Signals and Classifying them using affecting Computing" presented at 2nd International Conference on Wireless Signal Processing and Networking WiSPNET SSN College of Engineering, Chennai and published in IEEE

## HONORS

- SPOT AWARD | Mu Sigma by Mr. Gurleen Sandhu
  Awarded for being a team player, being a support system and multi tasking deliverables and documentation.
- SPOT AWARD | Mu Sigma by Mr. Abhinav Kishore
  Awarded for single handedly maintaining and optimising the Assortment tool build on RShiny and supporting the team with business logics/ decisions for algorithm enhancement.
- ACADEMIC EXCELLENCE AWARD | Amrita Vishwa Vidyapeetham
  Awarded for 3rd rank in Bachelor of Technology in Electronics and Communication Engineering
- BEST VOLUNTEER AWARD | IEEE | Amrita Vishwa Vidyapeetham
  Awarded for being the best volunteer and chairperson of Women In Engineering IEEE student chapter, Amritapuri student branch, Kerala