GitHub LinkedIn Portfolio

# Sidhartha Gopi Amperayani

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## **TECHNICAL SKILLS**

Languages and Databases: Python, Java, R, C++, MATLAB, HTML, XML, CSS, JavaScript, Node.js, MySQL, MongoDB

Libraries: Scikit-Learn, Pandas, SciPy, Flask, Selenium, Scrapy, TensorFlow, Keras, PyTorch, Matplotlib, Shiny, ggplot, React, Express.js

Tools: Jupyter Notebook, RStudio, Pentaho, Tableau, PowerBI, Kubernetes, CATIA, ANSYS, AutoCAD, SolidWorks, ROS

Big Data Technologies: Apache Spark, AWS, Pentaho, SAS, ETL, ELT

#### **EDUCATION**

Master of Science in Computer Science, Minor in Big Data Analytics | Rochester Institute of Technology

12/2022

Rochester, NY GPA: 3.61/4

Bachelor of Engineering in Mechatronics, Minor in Robotics | Manipal Institute of Technology

07/2019

Manipal, India GPA: 3.6/4

## **EXPERIENCE**

## Machine Learning Research Intern | MVSR Engineering College

05/2019 - 07/2019

Hyderabad, India

- Analyzed and processed the raw data from the automobile industry corpus
- Developed an Intelligent system to monitor the conditions of the vehicle's subsystem
- Enabled continuous learning from the Intelligent System using **Remaining Useful Life** (RUL) prediction, **Deviation Detection**, and **supervised classification**. Embedded the sensors and process units to study the system's robustness

## **CERTIFICATIONS**

- Advanced Graduate Certificate in Big Data Analytics | Rochester Institute of Technology
- Advanced Certification in Machine Learning | International Institute of Information Technology, Hyderabad
- Modern Application Development with Java on AWS Specialization | Coursera
- Browser based TensorFlow.js: Data and Deployment Specialization | Coursera

#### **PROJECTS**

#### **Drug Design Using Machine Learning**

- Extracted untapped bioactivity data that is publicly available and interpreted data using the **NumPy** model to perform the necessary calculations and computations
- Implemented **Proteochemometrics** (PCM) modeling to come up with new drug compositions based on how similar compounds bind to similar targets
- Performed Support Vector Machines, Deep-Learning, and Random Forest methods to prepare the metrics of the system built

## **Social Network Application using MERN**

- Built a web-based application that facilitates users to post pictures, videos, and entries
- Configured the server side using Node.js and Express.js and connected it to MongoDB
- Designed the frontend using **React**, **HTML**, and **CSS** to make it more interactive

#### YouTube Data Analysis

- Categorized videos based on comments and identified factors that affect the popularity index
- Built **Data lake** from scratch using **Amazon S3** to organize data and used **AWS Glue** crawler and **Lambda** to understand how the data is built and ran **ETL** on top of it for transformations where required
- Used **Amazon Athena** to understand and analyze the data. Developed a dashboard of multiple charts and graphs on **Amazon QuickSight** to visualize and understand the results

## **Employee Salary Estimator**

- Scraped job postings from Glassdoor using Selenium to extract features and performed data cleaning using Pandas and NLTK
- Performed feature engineering along with some Exploratory Data Analysis and combined text and numeric features using FeatureUnion
- Found that the Random Forest algorithm performed the best with a Mean Absolute Error of 11.22

#### Storing, Managing, and Analyzing Web APIs

- Developed a web application using Flask, MongoDB compass, and HTML
- Parsed and cleaned the data and loaded it to MongoDB compass
- Created the application to query the database from the server side by enabling varieties of filters using **pymongo**