RESHMIKA DHANDAPANI

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EDUCATION

Chennai, India **Easwari Engineering College** **2021**

- Bachelor of Engineering in Electronics and Communication Engineering; Grade: **8.67/10 CGPA** (up to Semester VI)

Riyadh, Kingdom of Saudi Arabia **International Indian Public School** **2017**

- 10th - Grade: **10/10 CGPA**
- 12th - Physics, Chemistry, Math & Computer Science; **86.2%**

WORK EXPERIENCE

Data Science and Business Analytics Intern **The Sparks Foundation** **Dec 2020-Present**

- Translating complex data sets into comprehensive visual representations and applying statistical and algebraic techniques to interpret key points from gathered data.
- Presenting data science findings to peers, illustrating progress made during various tasks.
- Working remotely with very little supervision, meeting daily deadlines and goals.

Machine Learning Intern **Career Launcher** **May 2020-June 2020**

- Performed Data Cleaning and Wrangling on several financial stocks and extensively worked on different data exploration and visualization techniques.
- Found the correlation between different stocks and their diversification and created trade calls using Simple Moving Average and Bollinger Bands with 95% accuracy.
- Created a regression model for recognizing discrepancies in prediction and used linear regression (OLS) to find Beta values and measured the efficiency of each trading algorithm.
- Also created a Modern Portfolio Theory and applied K-Means Clustering to group similar stocks based on their performance in the market.

Undergraduate Project Assistant **Solarillion Foundation** **Jan 2019-Dec 2019**

As a project assistant and trainee, I worked on various Arduino projects and Machine Learning models under Research teams.

- Designed a proportional controller algorithm for automatic speed control of a 12V DC motor.
- This setup makes the motor spin at a desired rpm and does not allow any load to affect it.

SKILLS

- Experience in creating **Artificial Intelligence** applications using **Computer Vision, Machine Learning and Deep Learning with Python. Deep Learning Techniques includes ANN, CNN, RNN, Advanced CNN and Advanced RNN with LSTM.**
- Skilled in libraries such as **Keras, OpenCV, TensorFlow, Scikit-learn, NumPy, Pandas, Matplotlib.**
- Platforms and Misc**.: Anaconda, Jupyter Notebook, Spyder IDE.**
- Intermediate skills of **C, C++, IOT** and **Arduino Programming.**
- Basic knowledge of working with **MySQL and Tableau for Data Visualization.**
- Basic knowledge of **Deployment of Models** using **Flask Applications in Heroku and Dockers in AWS cloud.**
- **Interpersonal Skills:** Event Management, Team Management, Public Speaking, Content Writing, Proofreading.

PROJECT EXPERIENCE (THE LINK TO MY PROJECTS IS AVAILABLE HERE)

1. **Flight Fare Prediction Web App Using Machine Learning (09/2020)**
   A machine learning web app to predict domestic flight fare prices in India. Performed various feature engineering techniques and deployed Using Flask on Heroku Platform. Accuracy Obtained: **81.1%** using Random Forest Regression Technique.
2. **Diabetes Predictor Web App Using Machine Learning (08/2020)**
   A ML based Web App to predict Diabetes. Obtained an accuracy of **98%.** Deployed using Flask on Heroku Platform.

3. **Driver Activity Recognition Using Deep Learning (06/2020-07/2020)**
   This model focuses on driver distraction activities via images of the driver using various regression and classification algorithms such as Linear Regression, Decision Trees, Naïve Bayes' and CNN. Obtained an accuracy of **94.33%** Using CNN.
4. **Car Price Prediction Using Random Forest Regression (06/2020)**
   This model predicts the Price of a car based on km driven, age of the car, present price, fuel type etc. Performed feature extraction, data preprocessing, hyper parameter tuning and applied machine learning models to obtain output. R2 score: **0.866**.
5. **Sentiment Analysis with Amazon Reviews using NLP (05/2020-06/2020)**
   Dataset taken from Kaggle. Natural Language Processing (NLP) to predict whether the sentiment of review is positive or average or negative. Models applied: Naive Bayes Logistic Regression, Long Short-Term Memory (LSTM) with GloVe. Accuracy: **91.3%.**
6. **Social Distancing Tracker Using OpenCV (05/2020)**
   This project will detect if people are following physical distancing and will send an alert if not. The module is built using pre-trained YOLO model on COCO dataset with OpenCV.
7. **Wine Variety Prediction (05/2020)**
   An NLP implementation for wine variety prediction using customer reviews. Models Used – Decision Tree, Logistic Regression, SVM. Highest Accuracy – **84.87% (SVM)**
8. **Face Mask Detection Using OpenCV (04/2020-05/2020)**
   A real-time face mask detector from CCTV camera which detects and sends alert if face mask is not worn. Accuracy: **95.65%**
9. **Artistic Style Transfer Using VGG 16 (04/2020)**
   This project uses a deep learning technique that merges two images, namely, a "content" image (A) and a "style" image (B), to create a "generated" image (G). This model was implemented using Transfer Learning.
10. **Movie Recommendation System (03/2020)**
    Recommending based on *Movie Description, Credits and Keywords, Collaborative filtering and Hybrid filtering.*
11. **Sign Language to Text and Voice Conversion Using Machine Learning (12/2019 – Present)**
    A translator that can detect hand gestures in an image and translate its meaning to text and speech using Convolutional Neural Networks (CNN). This translator performs image processing and applies Machine Learning over real time video streaming to recognize the gesture and decode its meaning. Accuracy Obtained: **89%.**
12. **DC Motor Speed Control Using Arduino (04/2019-06/2019)**
    The objective of the project was to design a closed loop speed control system for a 12V DC motor using Arduino and infer the RPM Vs PWM curve. This setup makes the motor spin at a desired rpm and does not allow any load to affect it.

CERTIFICATIONS

- **Business Metrics for data driven Companies** (08/2020-09/2020)
  Coursera
- **Deep Learning Specialization** (04/2020 – 06/2020)
  Deeplearning.ai
- **PCAP: Programming Essentials in Python** (03/2020 – 04/2020)
  Cisco Networking Academy
- **Machine Learning: Python in Data Science** (12/2019 – 02/2020)
  Udemy
- **Internet of Things Workshop** (01/2019)
  IIT Madras
- **IOT Implant Training** (12/2018)
  BSNL

LEADERSHIP SKILLS

- **ECE Department Representative** (Vulcans) College Cultural Team (2019-2021)
- **Core Committee Member** (Retweet) Inter-College Cultural Team (2020-2021)
- **Community Chairperson** - Rotaract Club of SRM Easwari Engineering College (2019-20)
- **Joint Secretary** - Rotaract Club of SRM Easwari Engineering College (2018-19)
- **Cultural Secretary** International Indian Public School (2015-2016)
- Served as the **Master of Ceremonies** at various events conducted at SRM Easwari Engineering College(2018-Present)
- Active member of **IETE** (Institution of Electronics and Telecommunication Engineers)
- Active member of **SECE** (Society of Electronics and Communication Engineering)