Ruchita Shanbhag

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SUMMARY

I am looking for Data Science based internsip roles starting Summer 2022. I am passionate about creating and seeing the direct impact of my work in a product's client facing team. I belive my curiosity to dig deeper into data, craft creative data stories via visualization methods while handling data could contribute effectively for reaching informed data driven decisions. I enjoy working in a team with a goal-oriented approach, besides being dynamic, which enables me to thrive in a challenging environment.

EDUCATION

Boston University
2021-2023
Masters in Applied Data Analytics
CGPA-3.9
Courses: Data Science using Python, Data Visualization and Analysis with R, Machine Learning, Web Analytics,
Data Mining.
Software Specialist at BU IT Help Center

NMIMS Mukesh Patel School of Technology, Management and Engineering **07/16 - 05/20**
Bachelor of Technology in Electronics and Telecommunication Engineering
*GPA: **3.37/4***

PROFESSIONAL EXPERIENCE

Larsen & Toubro (Electrical and Automation)- Software Developer **07/20 – 07/21**

*Project Name: **Solar PV Power Forecasting** (https://github.com/ruchitashanbhag/Multivariate-Forecasting).*

- Forecast total power required for the week/month ahead using **predictive analysis** based on a 15-minute interval using seasonal **ARIMA** (Time Series Model) and **exogenous regressors.**
- For each combination of parameters, a new seasonal ARIMA model is fit with the **SARIMAX**() function from the **statsmodels** module in Python and assess its overall quality.
- **AIC** (**Akaike Information Criterion)** value, which is also returned with ARIMA models is used to check how well a model fits the data along with the least AIC score.
- The final **MAPE** (Mean Absolute Percentage Error) value obtained for the model was **8.7**%.

PROJECTS

Natural Language Processing Email Identification into Abusive/Non Abusive:
10/21-12/21

- A **Multinomial Naïve Baiyes** Classification Algorithm was used to classify the imblanced data set into Absive/Non Abusive using various techniques like oversampling(**SMOTEENN**), tokenising, vectorising (**Count Vectorizer**) and forming word clouds for insightful visualizations.
- The model was further deployed using Flask framework to form a web based application. (Video for Project)

'Grab and Go: Implementation of Smart Shopping Technology Using Computer Vision' **10/18 - 03/20**
A convenience store *based on Amazon's Go Smart Shopping Technology for the final-year project using **Python CV.***

- Deployed deep learning models like **Pose Estimation** and **Human Activity Recognition** to track a customer's entry and identified their actions.
- The model automatically senses when an item is picked up (**Facial Recognition**), and identifies the product picked using a **Product Identification Model** built using **Transfer Learning** along with pre-trained VGG weights
- A **Weight Sensor** (Load Cell along with an HX711 module) installed on the rack validates the number of units of the product picked up and creates a final receipt on Excel using a parallax data acquisition tool

***'Andhadhun Smart Cane*: An Aid for the Visually Impaired'**
12/17 - 04/18
Smart cane to cater to the visually impaired in order to make them independent & conscious of their surroundings

- Can detect moving obstacles, potholes, depressions, elevation, hot objects, and slippery floors before contact
- Used a GPS module with Arduino to obtain the user's coordinates that are emailed to an emergency contact to deal with any exigencies

ACHIEVEMENTS AND PUBLICATIONS

- Application for a Patent – Design Of an Adjustable Smart Cane for the Visually Challenged(*filed 10/19*).
- Presented a Research Paper for Smart Cane on '*Smart Cane - An Aid For The Visually* Challenged*'* at the *International Data Communication Technologies and Application* (*ICIDCA) 2019* in Coimbatore, Tamil Nadu

which was published in the journal *Lecture Notes on Data Engineering and Communication Technologies 46* in February 2020.

- Submitted a Research Paper on "*GRAB AND GO - Implementation of a Smart Shopping Technology using Computer Vision*." at the *International Conference on Contemporary Engineering and Technology Evolution* (*ICCETE*) *May 2020* in Ghaziabad. The paper has been published in June 2020. Video for GRAB and GO
- Published an article on **Medium (Analytics Vidhya)** about how to start your own ML Model Building project showcasing different ML Algorithms along with Hyper-parameter Tuning and Performance Metrics using real use-case scenarios.

SKILLS and INTERESTS

Python, RStudio, SQL, Tableau, Statistical Analysis using Machine Learning Models, MS Office, Dancing, Music and Pilates.