SHREERAM GUDEMARANAHALLI SUBRAMANYA

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EDUCATION

State University of New York at Buffalo, United States   August 2021 - February 2023
Master of Professional Studies, Data Science and Applications
The National Institute of Engineering, Mysore   August 2016 - May 2020
Bachelor of Engineering, Computer Science Engineering

SKILLS

- **Programming Languages:** Python 3, R, JavaScript, Scala, C, C++, Java
- **Databases:** SQL Server, MySQL, PostgreSQL, MongoDB
- **Machine Learning Tools:** Pytorch, Tensor Flow, Keras, Pandas, Sci-kit learn, Seaborn, Data Mining, Web Scrapping
- **Tools:** Visual Studio, Talend Data Integration, Apache Spark, Tableau, Jupyter, Google Colab, GCP, Git, Lucidchart, Miro, Excel

EXPERIENCE

Researcher| Center for Unified Biometrics and Sensors Lab (UB)   August 2021 – Present
- NSF CITER Grant | Proposed a spatio-temporal multimodal network, to learn the elastic difference between a live and fake finger, by focusing on intentional distortion induced through motion during fingerprint acquisition
- Collaborated with various academic and industry experts, and prepared POC to support the research opportunity
- Created a novel dataset (GestSpoof) of 1 million fingerprint images. Conducted quantitative analysis of live/ fake fingerprints using Looker and visualized data with various pie plots, histograms, correlation maps, and scatter plots
- Designed various Data Flow Diagrams, Case Diagrams, Activity diagrams, Entity Relationship Diagrams with LookML
- Proposed a spatio-temporal multimodal video classification approach using **PyTorch** video-based transformer and NIST minDTCT
- Evaluated static image-based approaches with several deep residual network architectures like ResNet_50, ViT Base and SwinV2
- Improved model performance by evaluating metrics such as accuracy, F1 score, TAR@FAR and APCER@BPCER
- Paper (GestSpoof: Gesture Based Spatio-Temporal Representation Learning For Robust Fingerprint PAD) submitted to **IEEE FG**

Data Scientist| Cognitron Technologies   March 2020 – July 2021
- Designed an Education CRM tool to improve student enrollment and engagement in public schools, saving 100 hours/week
- Coordinated with various Public Educational stakeholders, to gather business needs and develop frameworks to manage student information. Facilitated scaling the CRM to multiple schools, by implementing various data integration solutions
- Established A/B testing framework for student engagement tool, including hypothesis development, test group segmentation, and statistical significance testing, resulting in a 10% increase in overall student engagement
- Designed various dashboards on Tableau to present business-driven insights to technical and non-technical stakeholders
- Developed automation scripts using Python to aid in handling, editing, and exporting huge volumes of customer data, extending the export capability of the product by more than 95%

ACADEMIC PROJECTS

Depression Detection from social media platforms: Python 3, Sci-kit learn, Plotly, Pandas, NumPy   May 2022 – August 2022
- Devised a suicide post detector using NLP and ML to classify the depression behavior of an individual using social media posts
- Led a team of 5, scrapped data from various social media platforms such as Reddit, and Twitter, using **snscrape** and **Reddit API**
- Transformed unstructured data to a structured format by extracting relevant information such as text, mentions and timestamps
- Pre-processed 15,00 suicide posts dataset by removing hashtags, links and evaluated Lemmatization and Stemming techniques
- Performed **content analysis** (topic modeling, sentiment analysis, topic distribution) and visualized the data using Plotly
- Devised a binary classifier model using feature selection techniques like XGBoost, SVM, and Random Forest to differentiate between suicidal and non-suicidal social media posts

US House Rent Predictor: Python 3, Kaggle, MySQL, Streamlit, Seaborn,   January 2022 – May 2022
- Standardized and Preprocessed 75,000 US property listings, loaded into a SQL database for analysis. Employed regression models (Linear, Decision Tree, Gradient Boosting) to identify optimal models for the data
- Developed a **Streamlit** web application to display predicted house rental prices based on input house attributes

Pneumonia Detector by Chest X-Ray: Python 3, Keras, Open CV   September 2019 – February 2020
- Classified pneumonia in chest X-ray images using deep learning (ResNet_50, VGG) and evaluate the performance using ROC
- Published paper in the International Journal of Engineering Science and Computing (**IJESC**)

CERTIFICATIONS

- [AZ-900](AZ-900): Microsoft Azure Cloud Fundamentals | Microsoft | January 2023