SHREERAM GUDEMARANAHALLI SUBRAMANYA

(+1) 716 306 9169 | sgudemar@buffalo.edu | github.com/shreeramgs | linkedin.com/in/shreeramgs/

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, 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
- **Predictive Modeling:** Linear Regression, Classification, Resampling Methods, Tree-Based Models, SVM, Clustering, Text Mining
- **Tools:** Visual Studio, Talend Data Integration, Apache Spark, Tableau, Jupyter, GCP, Git, Miro, Git, Advanced Excel, MS Office

EXPERIENCE

Research Assistant | Center for Unified Biometrics and Sensors Lab (UB) December 2022 – Present

- Generated **2.4 million** synthetic fingerprints using directional kernels and Gabor-like space-variant filters with varying noise levels available in the Anguli generator to improve contactless fingerprint recognition using Pytorch pre-trained **Swin-Transformer**
- Created **data flow diagrams** with **Miro**, streamlined data collection pipeline for fingerprint acquisition using an optical sensor, resulting in increased productivity. Refined the dataset file structure and prepared technical documentation
- Boosted classification performance by **3.13%** through the fusion of minutia silhouette features and latent features extracted using the Resnet101 backbone. Project funded by **Qualcomm**
- Assessed performance against the requirements, and evaluated performance shortfalls, to improve the spoof detection model
- Actively participated in daily stand-ups and made impactful progress on the development of KPIs

Data Science Intern | Cognitron Technologies December 2020 – July 2021

- Collaborated with cross-functional agile teams to gather and analyze business requirements and strategize functional workflow
- Worked on Linux system for batch data loading, job scheduling, and system resource checking
- Contributed to crafting user stories based on data models, and developed SQL queries and stored procedures for ad-hoc requests
- Designed **Talend** ETL jobs for data extraction, integration, and mapping from sources like flat files, CSVs, and relational tables
- Combined multiple **Tableau** dashboards into a single story to enhance the visual appeal and presented insights to stakeholders
- Configured a **CI-CD** pipeline using GitHub actions to automate the updation of Tableau dashboards and Talend delimited files
- Devised a forecasting model using historical data in **R,** and improved student grades prediction by 70%

ACADEMIC PROJECTS

Depression Detection from social media platforms: Python 3, Sci-kit learn, Plotly, Pandas, NumPy May 2022 – August 2022

- Led a team of 5, scrapped data from various social media platforms such as Reddit, and Twitter, using **snscrape** and **Reddit API**
- Transformed high-dimensional unstructured data 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 feature selection (XGBoost, SVM, logistic regression, Random Forest) and constructed a binary classifier model 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. Employed predictive modeling (Linear, Decision Tree, Gradient Boosting) and forecasted the US house rental price with 93% accuracy
- Developed a **Streamlit** web application to display predicted house rental prices based on input house attributes

E-wallet Money Transaction System February 2020 – May 2020

- Built an online wallet-responsive web application with ExpressJS, NodeJS, Materialize, and JavaScript a tech stack
- Developed restful APIs with JSON and connected to a SQL database. Created indexes to improve efficient history retrieval

Pneumonia Detector by Chest X-Ray: Python 3 Apache MXNet, sklearn September 2019 – February 2020

- Classified pneumonia in chest X-ray images using a CNN model with transfer learning, utilizing pre-trained weights of ResNet50 and VGG16. Employed data augmentation, implemented DataLoaders with gluon, and evaluated performance metrics
- Published paper in the International Journal of Engineering Science and Computing (**IJESC**)

CERTIFICATIONS

- AZ-900: Microsoft Azure Cloud Fundamentals | Microsoft | January 2023