VIDYASRI GANAPATHI RAVI

(831) 854-6570 vidyasrigr@gmail.com linkedin.com/in/VidyasriGR github.com/VidyasriGR

EDUCATION

University of California Santa Cruz **Sep 2021 – June 2023 (expected)**
Master of Science in Computer Science *Santa Cruz, CA*

- Relevant Coursework - Artificial Intelligence, Advanced Machine Learning, Foundations of Data Science, Introduction to Statistical Data Analysis, Analysis of Algorithms

Kumaraguru College of Technology **Aug 2011 – Apr 2015**
Bachelor of Engineering in Computer Science *Coimbatore, India*

- Relevant Coursework - Data Structures, Design and Analysis of Algorithms, Object Oriented Programming

TECHNICAL SKILLS

Languages: Python, R, PostgreSQL, SQL, Bash/Shell, HTML, CSS
IDEs: Jupyter Notebook, R Studio, VS Code, PyCharm, Docker
Frameworks: TensorFlow, PyTorch, Keras, Scikit-learn, Pandas, NumPy, SciPy, OpenCV, NLTK
Tools: SFDC, Tableau, Apache Spark, Git, LaTeX
ML Algorithms: CNN, RNN, LSTM, GAN, Transformers, MAML, RL, Regression & Classification, Clustering, Boosting

WORK EXPERIENCE

Teaching Assistant **Sep 2021 – Present**
University of California Santa Cruz *Santa Cruz, CA*

- TA for 4 courses - Programming Abstractions in Python, Advanced Programming, Introduction to Software Engineering, and System Analysis and Design
- Key topics discussed in these courses - Python 3 methods, structures, symbolic expressions & Machine Learning, graphs, dynamic algorithms and tree traversal algorithms; Data abstraction, inheritance, polymorphism, and object-oriented design; Requirements analysis, design, development, validation, maintenance and management of well-engineered software systems.

Data Analyst **May 2016 – Aug 2021**
CVS Health (Cognizant) *Coimbatore, India*

- Utilized propensity modeling to visualize customer drug utilization and optimize pricing, leading to a 12% boost in annual revenue.
- Created dynamic Tableau dashboards for 20+ healthcare providers to display market share and drug performance, saving 3 hours of manual effort per week and eliminating redundant work across 4 LOB teams.
- Led a team of 7 analysts and trained 30+ analysts in employing predictive modeling to tailor profitable healthcare plans for three $10B portfolios, resulting in incremental revenue.
- Built analytical pipelines for ad-hoc analysis and in-depth investigation of healthcare utilization trends and drug dispensation turnaround time, and deployed them in the cloud using GCP.
- Performed ETL on structured, semi-structured and unstructured data corresponding to 500,000+ health plans to make financial projections of drug spend and profit margin.
- Presented insights generated by advanced SQL queries to non-technical stakeholders from 25+ leading health insurance companies.
- Received Pillar of the Month and Star Performer awards numerous times, for excellence as a Data Analyst, SME and Team Lead.

PROJECTS

Description Generation for Images using DNN and XAI | *PyTorch, SHAP, Python* **Jan 2023 - May 2023**

- Used VGG-16 for image classification and LSTM for sentence generation, achieving a BLEU score of 0.61433 on Flicker30k dataset.
- Used post-hoc methods of SHAP to enhance interpretability of the decision-making process of black-box models.

HD Anime Face Generator | *Keras, TensorFlow, NumPy, Matplotlib, CUDA, Python* **Mar 2023 - Apr 2023**

- Implemented DCGANs to generate diverse high quality anime faces using Kaggle's Anime Face dataset of 92000+ HD images.
- The model achieved an FID score of 56 indicating a close match between the distribution of generated and real images.

Creating a Viral TikTok Video | *R Studio, XGBoost, ggplot2, dplyr* **Sep 2022 - Oct 2022**

- Analyzed Kaggle's TikTok dataset of 3500+ observations with 27 features through EDA, multi-way ANOVA, and PCA.
- Trained on MLR, Logistic Regression, KNN, SVM, and XGBoost to identify the key features for a TikTok video to go viral.
- Compared the results for 5, 8, and 12 features using AUC ROC, F1 score, and heatmap, determining the 8 features crucial for creating a viral TikTok video.

Bitcoin Time Series Forecasting | *TensorFlow, Pandas, NumPy, Python* **Dec 2021 - Jan 2022**

- Trained a Machine Learning Model using bi-directional LSTM Neural Network on Yahoo Finance dataset with upto 97% accuracy and RMSE loss of 0.054 indicating a good fit.
- Compared the results of Bi-LSTM with ARIMA, GRU and LSTM models and concluded that Bi-LSTM outperforms the other models.