Chakradhaar Viswatmula

LinkedIn | Portfolio

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SKILLS

Programming and Query Languages: Python, R, C, Java, JavaScript, HTML, CSS, SQL
Data Visualization Tools: Tableau, Excel, Matplotlib, Seaborn, GGplot
Python Libraries: Pandas, Numpy, SciPy, Scikit-Learn, Tensorflow, Keras, OpenAI Gym, Pytorch
Cloud and Big Data: Hadoop, PySpark, MongoDB, AWS EC2, Google Cloud Platform, Docker
Data Science and Miscellaneous: ETL, A/B Testing, Data Science Pipeline,, Statistics, Time Series, OOP, Excel, Git

CERTIFICATIONS

Tensorflow Developer Certificate
Google Data Analytics Professional Certificate

PROFESSIONAL EXPERIENCE

Product Intern (Data Science) | Ekta Flow - Sigma Chi | Chicago, USA | January 2021 - May 2021

- Implemented an unsupervised ML technique in Python to segment 30k donors for a major non-profit organization in order to design strategies for a collective set of donors containing similar characteristics. (Done using *Python*, *scikit-learn, K-modes clustering*).
- Used Principal Component Analysis to reduce 15 different rating variables assigned to each donor to 3 new rating variables.
- Implemented a survival model to obtain the likelihood of donors' period of association with the organization and an RFM model to predict the next expected donation date for each donor respectively.
- Created 5 *Tableau* dashboards containing executive summaries, information on KPIs and results from ML models and presented results to the organization's Chief Marketing Officer to present to senior leadership and acquisition officers.

Computer Vision Intern | AeroLogiks Pvt. Ltd. | Bengaluru, India | January 2019 - June 2019

- Built a lightweight ground-object detection model and implemented obstacle avoidance for autonomous quadcopter flights using Python libraries like opencv, tensorflow-lite and scikit-learn on bare minimum hardware (Raspberry-pi) and computational capacity.
- Brought in various ideas of implementing the project and communicated costs and benefits after extensive research since I was fully incharge of image processing within the company at the time, setting the tone for future projects of larger scale.

Data Engineering Intern | Medley Medical Solutions Pvt. Ltd. | Hyderabad, India | June 2017 - August 2017

- Handled the company's *SQL*-based database on *phpMyAdmin* and used *BeautifulSoup* to scrape data from various internet sources of medical information to include third-party data. This helped add more pharmaceutical drugs' information on the platform's inventory.

ACADEMIC & PERSONAL PROJECTS *(more at https://chakradhaarrv.github.io/)*

NLP Analysis of Financial Reports (*BeautifulSoup, Alphalens, Pandas, Sklearn and Nltk Python libraries*):

- Scraped 10-K Filings from the SEC website using BeautifulSoup and selected key sections for NLP Analysis to create a text based stock selection model based on an academic paper titled Lazy Prices.
- Performed sentiment analysis on the 10-ks and evaluated the alpha factors by their Sharpe Ratio using the Alphalens library.

Stock Pairs Trading Automation (*Python, Keras, OpenAI, Numpy, Pandas, Reinforcement Learning*):

- Implemented Deep Q-Learning and defined the state, action and reward for a learning agent to be able to decide on trading actions for a pair of stocks.
- Referred a research paper on forex trading pairs and used that as a baseline to code out the implementation strategy for a pair of stocks with the intention of maximizing returns.

Spirit Airlines Performance Analysis (*Tableau Desktop*):

- Visualized data from the Bureau of Transportation Statistics dataset depicting stats that best describe the on-time performance of Spirit Airlines illustrating patterns and associations between metrics.
- Prepared visual evidence identifying the most similar competitors and comparing metrics using various charts and graphs in Tableau.

Loan Default Prediction (*R, dplyr, ggplot, Python, Scikit-learn*):

- Explored modeling techniques, EDA and feature selection and evaluation techniques in order to understand the workflow of machine learning projects and how to implement ML algorithms in both R and Python.
- Implemented a random forest model with random search, a linear regression model with grid search, support vector machines, k-nearest neighbors and a multi-layer perceptron classifier.

EDUCATION

University of Illinois at Chicago | Chicago, IL, USA | Jan 2020 - May 2021
Master of Science, Data Science and Business Analytics *GPA: 4.0*
Relevant Courses: Advanced DBMS, Advanced Predictive Models, Statistical Models, Data Mining, Big Data Analytics

PES University | Bengaluru, India | Aug 2015 - May 2019
Bachelor of Technology, Computer Science and Engineering
Relevant Courses: Intro to Python, Intro to Data Science, Machine Learning, Artificial Intelligence, DBMS, Linear Algebra, Big Data