ANURADHA RAMACHANDRAN

Seattle, WA ◇ +14083389328 ◇ anuram08@uw.edu ◇ LinkedIn ◇ Github ◇ Tableau Public

SUMMARY

- Statistics and Data Analysis Master's student at University of Washington (UW) Seattle expected to **graduate in March 2024** seeking opportunity in the field of Data Science.
- Skilled in harnessing data-driven insights through adept **time series analysis** and **statistical modeling**.
- Proficient in **Python, R, MySQL, JAVA, Tableau, Version Control (git), and Spark (certificate)**.
- Completed coursework in **Deep/Machine Learning, Causal Inference, Regression, Algorithms & Data Structures, Hypothesis Testing, Experimental Design.**

RELEVANT EXPERIENCE

Data Science Intern, Out of the Blue AI, (San Mateo, California) Jun 2023 - Sep 2023

Tools used: Python (statsmodel, VAR, dtaidistance), PostgreSQL, Time Series modeling, Hypothesis Testing, git

- Uncovered predictive **causal** links among KPIs and detected **correlated anomalies** using **statistical methods** (e.g., Granger Causality, Dynamic Time Warping), enhancing decision-making.
- Elevated anomaly detection precision by **25%** through a rigorous examination of uncertainty intervals derived from the Facebook PROPHET model applied to KPI time series data.

Fuel Cell Engineer, Ballard Power Systems, (Burnaby, Canada) Jul 2021 - Aug 2022

Tools used: Python (matplotlib, mysql.connector), MySQL, Grafana

- Developed a Python framework to analyze 3000-hour fuel cell stress test data, uncovering a critical failure mechanism and ensuring the acceptance of a **$400K** test report.
- Achieved a **75% reduction in station downtime** and optimized test scheduling through the development of a Python-based **dashboard** utilizing **Matplotlib**, enabling real-time test station productivity analysis.
- Effectively showcased a proof-of-concept project, demonstrating real-time gas consumption tracking through **data retrieval** from an **SQL** database and the creation of a dashboard in **Grafana**.

Research Assistant, University of British Columbia, (Vancouver, Canada) Sep 2020 - Jun 2021

Tools used: Experimental Design and ANOVA test in DesignExpert, Linear Regression

- Utilized **Central Composite Design** to experiment with bio-oil oxidation, resulting in a statistically significant product yield model. Calculated rate constants and activation energy using a linear model. (Results)

ACADEMIC PROJECTS

National Highway Toll Data-Pipeline - *Python (requests, BeautifulSoup, sqlite3), PySpark, SQL query*

- Utilized Python-based web scraping tools, like **requests and BeautifulSoup**, to extract revenue, toll-fee, and critical data from the National Highway Authority of India's website, preserving raw data within an SQLite database.
- Orchestrated an ETL (Extraction, Transformation, Load) pipeline using **PySpark** to transform raw data into valuable business insights. (Github repository here.)

Movie Recommendation app - *Streamlit, Recommendation System, Python (NLTK, Scikit-Learn, pickle)*

- Deployed on **Streamlit** community cloud to recommend movies based on **content-based filtering** technique.
- Constructed the model using the TMDB 5000 dataset and implemented **Bag of Words and stemming** with the NLTK package in Python to extract movie features. (Your next movie recommendation here!)

Bird call classifier using CNN - *Python (TensorFlow, keras, librosa, Scikit-Learn, imblearn), Image Classification*

- Generated mel-spectrograms from bird call audio samples through Python's librosa library and crafted two **CNN** models in **TensorFlow**. Employed **SMOTE, ADASYN, and weighted loss** to tackle class imbalance challenges.
- Performed hyperparameter tuning by experimenting with spectrogram features, batch size, epochs (Report here)

EDUCATION

University of Washington Seattle, Washington

Masters' in Statistics and Data Analysis (CGPA: 3.7/4) Sep 2022 - Mar 2024

University of British Columbia (UBC) Vancouver, Canada

Masters' in Chemical Engineering (CGPA: 3.3/4) Sep 2018 - Jun 2021