BRADEN TAACK

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SKILLS

PROGRAMMING LANGUAGES: Python, SQL, VBA, MongoDB
LIBRARIES: Pandas, Numpy, nltk, BeautifulSoup, Scikit-learn, Selenium, CorEx, regex
VISUALIZATIONS: Matplotlib, Seaborn, Plotly, Excel/Powerpoint, PI
OTHER: Streamlit, Heroku, Git
HOBBIES: Hiking, Biking, Music, Baseball, Computer Building, Traveling, MCU

EXPERIENCE

Metis, *Data Scientist*, New York, NY — Aug. 2021 - Nov. 2021
Completed an intensive 10 -week data science bootcamp. Selected projects include:

Musical Tweets - Analyzing Trending Topics for Tunes
- Used NLP techniques (NLTK, topic modeling/NMF & CorEx, Lemmatization) to discover 23 unique topics from 50,000 tweets
- Created a web app (Plotly, Streamlit, Heroku) to allow users to investigate and analyze topic modeling results

Air Quality Dashboard - A Data Pipeline for Location-Based Satellite Air Quality Data
- Developed air quality dashboard (Plotly, Streamlit, Heroku) to track and explore emissions trends
- Sourced data from Emissions API and stored in Atlas MongoDB for dashboard queries (Pymongo, Pandas, Numpy)

Chess Classification - Predicting Match Outcomes
- Predicted chess match outcome by leveraging classification algorithms (logistic, Random Forest, KNN, XGBoost) and engineering player statistics features to optimize f1-score
- Achieved model accuracy of 70% from a sample of 30,000 games obtained from the chess.com API

Formula 1 - Drive to Supervised Learning
- Scrapped 3000 pages of Formula 1 race data using Selenium and BeautifulSoup
- Modeled driver finish position by utilizing linear regression algorithms (Linear, LASSO, Ridge) and engineering features

Valero Energy, *Process Controls Engineer*, Benicia, CA — July 2019 - Aug. 2021
- Executed extensive hardware/program testing and 5 operator training sessions for a $10M+ critical safety system project
- Implemented >1250 new data collection points and converted legacy graphics to new data visualization software (PI) for a safety interlock system
- Investigated and presented root cause analysis based on time series data for multiple operational events such as a furnace trip and a selective catalytic reactor trip
- Generated and analyzed monthly alarm management KPIs to present to leadership along with actionable improvement opportunities
- Prepared workshops and instructed math courses to a class of 30 operator trainees

Process Controls Engineer Intern — May 2018 - Aug. 2018
- Designed a program in Honeywell AMCL code with Mechanical and Operations to mitigate potential large equipment failure
- Programmed an alarm import/export macro (VBA) to streamline alarm management which saved several hours per use and reduced errors
- Developed DMC vector file conversion tool (VBA) to greatly improve ease of trending historical tag data in ASPEN DMCplus
- Enhanced existing graphics for reactor start-up display in local process visualization software (HMI WebBuilder)
- Updated 2000+ data point detail graphics to a more intuitive template that prioritized key parameters for operations

EDUCATION

The University of Texas at Austin
Bachelor of Science Chemical Engineering 2019
Business Certificate

ACCOMPLISHMENTS

- **VP of Activities of Valero Volunteer Council** - Spearheaded Coastal Cleanup and Valero Benicia's Earth Week
- **President of Valero Off the Job Safety and Wellness** - Organized and supervised $10,000 budget for Wellness Events
- **Co-Founder of Student Advisory Board** - Established UT's first student educator conference with workshops and a speaker series
- **1st in UT Cardboard Boat Regatta** - Designed, built, and raced a boat made solely of cardboard