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EDUCATION

Bachelor of Science, Computer Science, Expected Graduation 2023
Western Governor's University, Las Vegas, Nevada
Data Science/Machine Learning Bootcamp, 2021
Springboard, Online
Bachelor of Science, Parks Management, 2015
Arizona State University, Phoenix, Arizona

EXPERIENCE AND PROJECTS

Medical Appointment Scheduling Application, *Java, SceneBuilder, MySQL/SQL*
Developed a Java application for a hypothetical international health service provider to schedule appointments across offices around the world. Designed a UML diagram based on open ended project constraints. Created a MySQL database using MySQL Workbench and integrated JDBC in the program to access the database and perform SQL queries. Developed the program GUI using JavaFX and SceneBuilder. Implemented program logic by incorporating object-oriented programming concepts such as: normal and abstract classes, public and static members/methods, inheritance, dependency and more.

Vehicle Manufacturer Inventory Application, *Java, SceneBuilder*
Developed a GUI Java application for a hypothetical vehicle manufacturer to organize and maintain their inventory of vehicles and parts. Developed the program GUI using JavaFX and SceneBuilder. Implemented program logic by incorporating many object-oriented programming concepts such as: normal and abstract classes, public and static members/methods, inheritance, dependency and more.

Video Store Business Report, Postgre*SQL/SQL*
Developed a business report for a hypothetical video store which utilized complex SQL queries to generate business insights. Queries were written for data extraction, data transformation, and data loading tasks. Tasks included joining multiple tables and concatenating fields. Additionally, complex queries were created which implemented functions, stored procedures, and triggers.

Drought Prediction Model, *Python, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn*
Developed a binary classification model to predict drought levels using 20 years of meteorological timeseries and soil data from NASA as well as US Drought Monitor data. This project included all aspects of a standard data pipeline, from data wrangling, cleaning, and exploratory analysis to modeling. The most important features were identified using recursive feature elimination. Classification reports, confusion matrices, and ROC Curves were implemented to determine the best performing model, which was a Gradient Boosting model that achieved an 80% recall rate.

Water Quality Prediction Model, *Python, Scikit-Learn, Pandas, NumPy, Matplotlib, Seaborn*
Developed a binary classification model to predict water potability using a sample dataset from Kaggle.com. This project included all aspects of a standard data pipeline, from data wrangling, cleaning, and exploratory analysis to modeling. Due to the target feature being imbalanced in the dataset, synthetic minority oversampling technique was utilized to improve model performance. Additionally, a randomized grid search was used to tune the Random Forest Model hyperparameters. The trained model was able to achieve a 70% precision rate.

Desert Tortoise Biologist, ***Team Lead/Authorized Biologist,*** *NewFields 2015 - Present*
- Led teams of biologists in line transect surveys to collect data related to the Mojave Desert Tortoise, *Gopherus Agassizi,* and other species of interest such as burrowing owls, raptors, and various rare plants
- Conducted health assessments involving measuring tortoise size and weight, taking photographs, inspecting shell deformities, analyzing eye and nasal cavities for disease, gathering saliva and blood samples, collecting ticks, and attaching semi-permanent transmitters for future study
- Worked with construction crews on various solar projects to ensure the preservation of *Gopherus Agassizi*
- Utilized data collection applications and satellite imagery to document the location and status of desert tortoises