

DA GUO

DATA SCIENTIST

Experience

Metis

Data Scientist

Kirkland, WA
Mar. 2020 to June 2020

- Metis is an ACCET accredited 12 week immersive data science bootcamp focused on project oriented learning
- The core curriculum is centered around Python, statistics, supervised and unsupervised machine learning, exploratory data analysis, databases, and visualization techniques
- Completed five self designed data science projects from conception to presentation; including data collection, data management, exploratory data analysis, modeling, and visualizations

Graphite Design Group

Architectural Staff

Seattle, WA
2019 to 2019

- Staff member of the retail team focusing on tenant improvement
- Responsible for Starbucks remodeling account three weeks into the job
- Designed, permitted, and drafted projects including Amazon Books, MOD Pizza restaurants, and Starbucks
- Exposure to a few mixed-use commercial blocks including Amazon blocks and Bellevue Square. Performed building performance analysis

Data Science Projects

Exploratory Data Analysis: Maximizing Audience Reach for Women in Tech

Mar. 2020 to Apr. 2020

An exploratory data analysis project done for a fictional organization to help expanding their audience reach. By gathering, cleaning, and analyzing data from New York MTAturnstile data, three recommended stations were listed as recommendations to send survey team to for best potential per man power.

Linear Regression: Predicting the Magnitude of Steam discount

Apr. 2020 to Apr. 2020

Built a linear regression model to understand what drives Steam (largest PC retail game platform in the world) sales. Data was collected through scraping Steam page by using BeautifulSoup. Best performing model was chosen after numerous rounds of feature engineering and metric (MSE and R²) comparisons between three different regressors. A live deployment of the model that can predict the magnitude of Steam game discount by entering basic information was pickled and served on Heroku as a standalone Flask app. Data visualizations created with Tableau for exploratory purposes is hosted on the second page of the app. The app can be found at: <https://steam-discount-predictor.herokuapp.com/>

Supervised ML Classification: Predicting Possibility of Steam Game to be On Sale

Apr. 2020 to May 2020

Built a classification model to predict whether a Steam game would go on sale or not, which can benefit players and video game resellers alike. As a continuation of the linear regression project, this project utilizes the known important features and then further expands on them by performing feature extractions and feature selections through custom constructed pipelines. Best performing model was chosen by comparing predefined metric (ROC and F1) among seven different classifiers. The model is deployed and integrated into the previous Flask app.

The app can be found at: <https://steam-discount-predictor.herokuapp.com/>

Unsupervised ML Clustering: Analyzing Covid-19 Mask Sentiment in the USA

May 2020 to May 2020

Built an unsupervised clustering model to understand the differences in traits between those who support wearing masks and those who opposes it. Data collected through Twitter API and Covidtracking API. Sentiment analysis is done by using VaderSentiment, trained specifically for social media. Through topic modeling and other NLP techniques, three topic groups was found and tagged as "mask_must, maybe_wear, and mask_is_joke". Three clusters was also found containing different characteristics of tweets. Notable findings include that the group that had more negative sentiment towards mask wearing have the (1.shortest tweet length, 2.least subjectivity, 3.least likely to contain number in their tweets), and that mask sentiment has weak positive correlation with the infection rate. The findings along with a live sentiment tracker built with Plotly Dash was deployed on Heroku for exploratory purposes.

The app can be found at: <https://covid19-mask-sentiment.herokuapp.com/>

Education

Coding Dojo

Python stack Web Development 2019

C# stack Web Development 2019

MEAN stack Web Development 2020

Full stack immersive web development boot camp, with a focus on back-end data processing and front-end user experience.

Oct. 2019 to Jan. 2020

Washington State Univeristy

Master of Architecture Architecture 2019

B.S. in Architectural Studies Architecture 2017

Minor in Construction Management Construction Management 2016

Aug. 2013 to May 2019

Honors & Awards:

Nomination, AIA Henry Adams Medal, May 2019

Third Place, Capstone Competition, May 2016

Top Ten Design, WSU Solar Decathlon 2017, April 2015

Third Place, WSU SDC Portfolios Competition, January 2015

Contact

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Skills

PROGRAMMING LANGUAGES

Python

C#

JavaScript

HTML

CSS

DATA SCIENCE PACKAGES

Pandas

Numpy

Scikit-learn

Tensorflow

Keras

NLTK

DATA VIZ TOOLS

Matplotlib

Seaborn

Tableau

Plotly

Bokeh

Adobe Creative Suite

SUPERVISED MACHINE LEARNING

Decision trees

Ensembles (Bagging, Boosting)

k-NN

Linear Regression

Naive Bayes

Neural Networks

Logistic Regression

Support Vector Machine

UNSUPERVISED MACHINE LEARNING

k-means Clustering

DBSCAN

OPTICS

Hierarchical Clustering

Isolation Forest

Autoencoder

T-SNE

DATA/CLOUD

Dash

Apache Spark

Apache Kafka

MySQL

PostgreSQL

MongoDB

Blaze

AWS

BeautifulSoup

Selenium

WEB DEVELOPMENT FRAMEWORKS

Flask

Django

React

Angular

Nodejs

ASP.NET Core