

ESTEBAN ZUNIGA

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Skills

PROGRAMMING

Python
HTML/CSS
JavaScript

SUPERVISED MACHINE LEARNING

Linear/Logistic Regression
Tree-based methods (CART)
Neural Networks

UNSUPERVISED MACHINE LEARNING

K means
Dimensionality reduction

NATURAL LANGUAGE PROCESSING

Topic Modeling(NMF/LDA)
Collaborative Filtering
TF-IDF
Count Vectorizer

DATA TOOLS

Numpy
Pandas
SKlearn
Keras
Spark

DATABASES

SQL
MongoDB

DATA VISUALIZATION

Matplotlib
Seaborn
Tableau
Plotly
D3

Activities

Playing Jazz Guitar
Tennis

Education

St. Thomas School of Law

July 2019 to Dec. 2019

City College of New York

Bachelor History 2014

Jazz Studies; Economics

Experience

Metis

Data Scientist

New York, NY

June 2020 to Sept. 2020

Completed a 12-week accredited data science bootcamp focused on Python programming, machine learning, statistical modeling, data visualization, project design, and communication. Devised five individual supervised and unsupervised machine learning models to implement objectives and build statistical models using historical data.

Dog/Cat Audio Classification using a Convolutional Neural Network

- Acquired wav files of dogs and cats from Kaggle
- Used Librosa to load and visualize to Time-Domain representation of the signal
- Converted Time-Domain and Frequency-Domain graphs into Spectrograms
- Built a Neural Network from scratch and performed a classification model on the Spectrograms
- Rebuilt the Neural Network using a pre-trained model VGG-16 as a base to improve accuracy

Sentiment Analysis on Rock Music Lyrics

- Performed topic modeling of rock music lyrics to examine broad themes that run through rock music
- Tools Used: NMF, LDA, TD-IDF and Count vectorizers

Predicting Loan Default

- Trained and built a classification model that would predict whether an applicant would default on a loan.
- Used historical data from the Lending Club and used a linear regression to select features such as debt-to-income ratio, income, credit score and years of employment.
- Modeled the default risk by comparing 3 different supervised classification models(logistic regression, decision tree and random forest.
- Suggested a threshold to set the model depending on risk tolerance.

Bronx Bombers--Predicting Yankee Home runs

- Web scraped historical Yankee data from 1960-2018 using Selenium and BeautifulSoup
- Used Pandas to put into a workable data.
- Used Scikit-learn's linear regression model to predict how many home runs a player would hit

MTA Data -- Exploring a location for a Rooftop Bar

- Used historical data from NYC MTA and cleaned and formatted into workable data
- Implemented Matplotlib and Seaborn to visualize and make statistical models of the data
- Made a suggested location based on subway stations that had high exit turnstile numbers near other bars during the evening and weekend hours

McAllen Lincoln Middle School

History Teacher

McAllen, TX

2014 to 2015

- Taught the Common Core curriculum for 7th grade history to a diverse set of children and assessed student learning styles and made appropriate adjustments to lesson plan
- Developed lesson plans and tracked student performance
- Responsible for managing the classroom environment to ensure teaching best practices while developing curriculum, and grading all exams and classwork

Volunteering

Bowery Mission

Volunteering at a shelter. Supporting the food line by assembling and serving meals to residents.

Jan. 2012 to Current