

Michael Emmert

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About Me

Data science profession with a background in mechanical engineering and a passion for taking big data and rendering valuable plots to drive decision making. Specializes in python data visualization to build team understanding through interactive dashboards and presentations. Experienced in creating solutions-oriented strategies across volunteering, engineering and data science projects.

Education

The George Washington University
Bachelor of Science Mechanical Engineering
Presidential Academic Scholarship
Washington, D.C.
Aug. 2015 - May 2019

Skills

LANGUAGES

- Python
- R
- SQL
- VBA
- Spark
- MATLAB

MACHINE LEARNING

- Multiple Linear Regression
- Logistic Regression
- Naive Bayes
- KNN
- Random Forest
- XGBoost
- PCA
- K-Means
- SVM

TOOLS

- Jupyter
- RStudio
- Sublime
- Dash
- Tableau
- Looker
- Scrapy
- R Shiny
- MySQL
- SQLite
- PostgreSQL
- Git
- Bloomberg Terminal
- Microsoft Office Suite
- SolidWorks

Projects

PNC API Code Fest S.T.E.A.M. Summit
Oct. 2019
1st Place

- Designed an application to increase young adult customer acquisition for PNC's Zelle by targeting student organizations
- Implemented a SQL backend for android application and performed data analysis to expound application feasibility

Predicting Market Movement Using Machine Learning

Aug. 2019

- Implemented K-Nearest Neighbors to identify market trends on the S&P500 over multiple large datasets
- Created data visualizations to optimize performance and enhance understanding

Silicone 3D Printer

Jan. 2019 – May 2019

- Reduced cost of integral mechanism to enable medical testing of 3D printed parts to be available to low budget facilities
- Architected pump system alternative applying advanced mathematics to solve heat flow problems

Experience

New York City Data Science Academy

New York, NY

Data Science Fellowship

Jan. 2020 to Mar. 2020

- Full-time intensive data science program built around Python and R
- Expanded knowledge in SQL, Git, advanced mathematics, data visualization, machine learning, and big data

Consumer Behavior Insights for an Online Grocer

- Drove profit by recommending high-margin products to low-frequency users
- Identified low-frequency users with 80% accuracy using XGBoost
- Performed Exploratory data analysis, visualization on big data and unsupervised clustering
- Applied apriori algorithm to identify clustered items to maximize profit for recommendations

Predicting House Prices in Ames, Iowa

- Improved house price evaluations to reduce the discrepancy between buyers and sellers
- Stacked MLR, ElasticNet and XGBoost to optimize model performance
- Created a data cleaning pipeline to perform exploratory data analysis, visualization and parameter optimization

Data Analysis Web Scraping OpenTable

- Identified factors for success in the restaurant world by scraping OpenTable's website
- Performed data analysis and visualization to support findings of restaurant opportunities with minimal risk

R Shiny Book Suggestion Platform

- Created an R Shiny dashboard that implements NLP on book descriptions to recommend books
- Generated Interactive plots using both ggplot and GoogleVis

Elevator Systems, Inc.

Long Island, NY

Engineer I

Aug. 2019 to Dec. 2019

- Developed code automation to increase efficiency in elevator system production
- Performed research and development testing on elevator systems to reduce cost and improve performance

Burpee MedSystems

Eatontown, NJ

Engineering Internship

June 2018 to Aug. 2018

- Collaborated with internal teams and led design verification testing to meet client specifications
- Performed root cause analysis and reported results to lead project engineer
- Researched and implemented ways to improve current testing methods

Activities and Volunteering

Pi Kappa Phi GWU

Oct. 2016 - May 2019

Member

Washington, D.C.

- Organized philanthropy and fundraising events such as 24-hour Bikeathons for Push America

Best Buddies Program

Oct. 2012 - May 2015

Treasurer & Historian

Long Island, NY

- Oversaw fund allocation and financial analysis for county-wide events such as Friendship Walks
- Coordinated and spoke at fundraising events with hundreds of participants

All Saints AIDS Camp

Aug. 2014

Volunteer

Nassau, BS

- Built infrastructure to provide clean water to a segregated community
- Coordinated volunteers to efficiently distribute food and supplies
- Led community-building activities that provided support for isolated individuals

Hurricane Sandy Relief

Aug. 2012

Volunteer

Long Island, NY

- Worked within a team of ten volunteers to efficiently restore a town community center
- Coordinated and oversaw community-building activities