

SETH CHART, PhD

Towson, MD, 21286 | 443-303-7114 | seth.chart@protonmail.com | [GitHub: sethchart](https://github.com/sethchart) | [LinkedIn: sethchart](https://www.linkedin.com/in/sethchart) | sethchart.com

Data Scientist

Experience in data acquisition and data modeling, statistical analysis, machine learning, deep learning, and NLP. With a background in mathematics and database management, I bring strong skills in project management and education that help data driven companies realize their mission.

TECHNICAL SKILLS

Python, OOP, SQL, scikit-learn, NumPy, Pandas, Keras, Pyspark.

TECHNICAL PROJECTS

Baltimore Real Estate Investment

Time series models identify five zip codes in the city of Baltimore, MD with the highest expected two year ROI for single family homes.

- Collected relevant data from Zillow to ensure that the model was trained on up-to-date data.
- Designed a unique data structure to facilitate modeling each zip code separately to maximize model accuracy.
- Implemented OOP to provide seamless interaction with the model and encapsulate complexity.
- Produced a portable and scalable solution that can easily be applied to other and larger regions.

Pump it Up Data Mining the Water Table

A competition submission identifying water wells in Tanzania that require repair.

- Built an end-to-end machine learning pipeline using scikit-learn to take raw data to reliable and replicable predictions.
- Executed a cross validated grid search of model hyper-parameters to ensure selection of an optimal model.
- Produced an XGBoosted random forest model that was ranked 385 out of 10,307 submissions (96th percentile).

Housing Market Analysis

Used publicly available data to predict house price in King County Washington.

- Cleaned data and engineered features to ensure model quality and accuracy.
- Evaluated model hypotheses to ensure validity of results.
- Explored and visualized geospatial data to gain insight.

EMPLOYMENT HISTORY

Database Manager, Immune Deficiency Foundation, Towson, MD 05/2019 - Present

- Coordinated integration between peer-to-peer fundraising platform and main database, essentially eliminating manual data entry and opening new revenue streams for my organization.
- Project managed the design, development, testing, and implementation of a custom volunteer management platform to eliminate manual data reconciliation and annual costs associated with the existing solution.
- Initiated effort to develop an organization wide process manual, which contributed to the decision to migrate to new database infrastructure that will better support organizational needs and goals.
- Leading database migration to provide better staff user experience, improved data model, and more automated workflows.

Lecturer, Towson University, Towson, MD 08/2016 - 05/2019

- Coordinated a multi-year pilot study implementing study sessions for undergraduate statistics students to evaluate efficacy in improving student outcomes. Presented findings at 2018 [RUME Conference](#) in San Diego.
- Selected as a 2018 [Project NExT Fellow](#) a fellowship for innovative mathematics education.
- Launched and coordinated the Mathematics Testing Center to streamline makeup testing and vastly reduce administrative effort.

EDUCATION

Flatiron School, New York, NY 08/2020 - 01/2021

Immersive Data Science Bootcamp program, January 2021

University of Victoria, Victoria, BC 08/2011 - 06/2016

Doctorate of Philosophy (PhD) in Mathematics, June 2016