Brendon Gu

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EDUCATION

Carnegie Mellon University Pittsburgh, PA   May 2022
B.S. in Mathematics (Statistics Concentration), Minor in Computer Science   QPA: 3.83/4.0

EXPERIENCE

Machine Learning Department, CMU   Aug 2021 - Present
Teaching Assistant, Introduction to Machine Learning
- Assisted in creation, testing, and grading of homework assignments and exams. Held office hours, led recitations, answered student questions on Piazza.
- As part of TA team, scheduled office hours to meet anticipated volume and fairly allocate hours to TAs. Scraped office hours data from course website to determine student volume and model future demand.

Department of Statistics and Data Science, CMU   Feb 2021 - Present
Teaching Assistant, Probability Theory for Computer Scientists / Probability Theory and Random Processes
- Held office hours, graded student homeworks and exams, answered student questions on Piazza.

CMU Student Academic Success Center   Feb 2019 – May 2021
SI/EXCEL Leader, Concepts of Mathematics / Calculus in 3D / Differential Equations
- Planned and led weekly small-group sessions for traditionally challenging math courses.

Equifax   May 2021 - Oct 2021
Data Engineer Intern   St. Louis, MO
- With manager, designed an end-to-end machine learning model for anomaly detection in streaming transaction data. Developed TensorFlow models to forecast volume and investigated methods to quantify uncertainty; used these to report on potential anomalous behavior in near real-time.
- Performed data cleaning, feature engineering, and model engineering. Created infrastructure for model versioning and model performance logging.
- Tools used: Python, Spyder, Jupyter, TensorFlow, BigQuery, Tableau

AMAG Pharmaceuticals   May 2019 - July 2019
Data Analysis Intern   Waltham, MA
- Developed custom SQL queries to retrieve and process patient safety data from ArisGlobal database.
- Designed visualizations and analytical dashboards in Tableau to present case processing metrics and facilitate medical event signal detection.

PROJECTS

Analysis of MLB Defensive Performance   Spring 2021
- With team, worked on research project for undisclosed MLB team to evaluate effects of age on defensive ability. Constructed projection systems and aging curves for defensive metrics in R.
- Presented at University of Pittsburgh's Mathfest, and to the Allegheny Mountain Section of the MAA and members of Sports Info Solutions.

Tableau Iron Viz 2020   Jul - Aug 2020
- Researched and compiled data about diets and created a long-form interactive visualization in Tableau for the 2020 Tableau Iron Viz Qualifier.
- Selected as **Runner Up, placing 6th** out of over 370 entrants. **Link:** https://tabsoft.co/3a1gUIf

NFL Big Data Bowl   Dec 2018 - Jan 2019
- With partner, used statistical modeling in R to create an expected catch probability model and to consider new standards for pass interference; proposed a novel two-level system for interference calls.
- Selected as **one of four college finalists,** presented findings at the 2019 NFL Combine.
- **Paper:** operations.nfl.com/media/3667/big-data-bowl-cmu.pdf

ACTIVITIES

CMU Ultimate Frisbee   Aug 2018 - Present