

# Brendon Gu

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## EDUCATION

**Stanford University** Stanford, CA Expected March 2024  
M.S. in Statistics

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

## EXPERIENCE

**Machine Learning Department, CMU** Aug 2021 - Aug 2022  
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 - May 2022  
Teaching Assistant, Introduction to Probability Modeling / Probability Theory and Random Processes

- Held office hours, graded student homeworks and exams, answered student questions on Piazza.

**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.

**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 analytical dashboards in Tableau to present case processing metrics and facilitate medical event signal detection.

## PROJECTS

**Mapping High-Impact Practices in Dietrich College** Spring 2022

- Worked on statistics capstone project to identify high-impact courses at CMU and improve the college's understanding of how they align with learning targets. Processed and analyzed course descriptions to perform classification using NLP methods, including word embeddings and structural topic modeling.
- Project poster chosen as **winner** of CMU Department of Statistics & Data Science Poster Competition.

**Analysis of MLB Defensive Performance** Spring 2021

- 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.

**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](https://operations.nfl.com/media/3667/big-data-bowl-cmu.pdf)