David Z. Osterman, Ph.D.

Westfield, NJ | d.z.osterman@gmail.com | davidzosterman.github.io
+1 908 821-6297 | linkedin.com/in/dzosterman | github.com/davidzosterman

Technical Skills

Languages	python, SQL, C, C++, git, bash, Linux
Libraries	numpy, pandas, sklearn, tensorflow, seaborn, matplotlib, NLTK
ML Techniques	NLP, deep learning, CNNs, Reinforcement Learning, Markov processes, Thompson sampling, UCB, data collection and cleaning, regression, classification, clustering, error analysis
Other Skills	API, stochastic optimization, statistical analysis, data visualization, data pipelines

Data Science Projects

Google Maps Re-Star (GitHub)

- Used natural language processing on Google Maps reviews to re-assign ratings out of 5 stars to restaurants.
- Employed a pre-trained RoBERTa model to perform sentiment analysis on review text.
- Technical skills: NLP, RoBERTa, sentiment analysis, sklearn, API, web-scraping, git

Experience

Graduate Research Assistant May 2021 - Feb. 2024
University of Massachusetts Amherst Physics Department *Amherst, MA*

- Led a team of three graduate students and one undergraduate students in an upgrade project resulting in a 200% expected increase in experiment performance.
- Constructed pipelines in Python for processing raw data. Employed causal inference and predictive models, which uncovered a 150% to 350% increase in device performance.
- Performed time series and event-based analysis, which contributed to two papers, including a world-leading physics publication (currently in-preparation).

SCGSR Fellow/CNM User June 2021 - Feb. 2024
Argonne National Laboratory *Lemont, IL*

- Upgraded data acquisition system to be fully automated - which reduced required manpower to one person - and fully remote - which reduced active time spent by 90%.
- Employed causal inference and predictive models for stochastic physical processes, and verified the effectiveness of a potential strategy for the collaboration.

Graduate Research Assistant Sept. 2016 - Jan 2021
Brown University *Providence, RI*

- Created the code basis of time series data digitization for the lab. Performed multivariate time series event ordering.

Education

Physics PhD, University of Massachusetts Amherst May 2021 - Feb. 2024
Thesis: Aluminum Quasiparticle Diffusion Measurements in Vacuum and Superfluid Helium 4
Awarded Department of Energy SCGSR Fellowship Fall 2020 June 2021 - April 2022
Physics Masters, Brown University Sept. 2016 - Jan. 2021
BS in Physics and Mathematics , Rutgers University Sept. 2011 - May 2015
Honors Program, GPA: 3.989