

Greg Simon, PhD

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Professional Summary

Expertise in the practice and theory of state-of-the-art machine learning, modern statistics and mathematics, quantitative modeling, and cloud computing for machine learning. Lead projects utilizing these skill to drive business value in pricing, revenue and sales forecasting, product recommendation systems, risk modeling. Passionate people-leader and developer – team-centered, goal-oriented, and driven to succeed.

Non-proprietary project portfolio available at: <https://gregorygsimon.github.io>

Education

PhD Mathematics, 2016, University of Michigan

MS Data Analytics, 2021, Western Governors University

BA Mathematics, 2010, University of California, Santa Cruz

- *cum laude* and *highest honors in the major* (mathematics)

Technical Skills

Languages: Python, R, SQL, Julia, Mathematica. Shell

Other: AWS Cloud, PyTorch, Spark, Git, Docker, MLflow, Tableau, Google Apps Script, Azure (Some)

Certifications: AWS Certification - Machine Learning Specialty (expires 2023, ID#RX11FD2CEB4E1WKF)

Employment Experience

Senior AI/ML Scientist – General Motors [2022–Present]

- Project lead of machine learning for CarBravo, GM's new used-vehicle marketplace
 - Led project developing probabilistic deep-learning time-series forecasting model for use in dealers' used-vehicle inventory management.
 - Developed novel algorithm for a product heat index that can be quantitatively validated – used as a value-add to CarBravo enrolled dealers – implemented in PyTorch.
 - Led project designing and implementing novel machine learning approach to customer preference/choice modeling linking customer demographics and desired product attributes.
 - Developed Bayesian regression model isolating causal effects of vehicle attributes' on days-to-sell.
- Helped develop autoencoder neural network model for anomalous driving detection for OnStar mobile.
 - Productionized model via MLflow, Kubernetes in Azure DevOps, Docker, uvicorn, FastAPI.

Data Scientist – Bayer Crop Science via Signature Consulting [2020 – 2022]

- Developed model for high-dimensional correlation / risk modeling via copula theory used to aggregate ML model results for financial simulations in new business models.
- Developed discrete-choice customer utility and decision models used for sales forecasting and correcting bias in revenue and risk forecasts.
- Team expert in AWS cloud services – developed team Glue data catalog, developed Lambda layers with docker to aid in app hosting, constructed data storage back-end for customer-facing app.

Course Faculty in Statistics - Western Governors University [2017 – 2020]

- Developed Python data pipeline to ingest and analyze student data for approx. 1500 active students in one course, including a machine learning model aligning coursework with positive student outcomes (XGBoost) and a dashboard to wrangle and visualize asynchronous student progress.

Graduate Student Instructor [2011-2016] then Lecturer [2016-2017] – University of Michigan

- Primary instructor for calculus series, differential equations and multivariable calculus.

Projects

Faculty for image recognition 6-week project with TrainX and Project Green Light 2019

- Lead five student-practitioners developing convolutional neural network image recognition model in AWS to predict make and models from images of car from street-facing webcams, in connection with Detroit PD
- Contact: Aubrey Agee, TrainX co-founder, aubrey@trainx.ai

updated: Mar 28, 2023