**Greg Simon, PhD**

****

**Summary**

Leader and expert in state-of-the-art machine learning and statistics, quantitative modeling, and cloud computing for machine learning. Experienced technical project lead with a passion for collaboration and helping teammates grow. Experienced in driving business value by developing products such as recommendation systems, LLM-enabled question-and-answer models, pricing models, revenue and sales forecasting, and risk modeling. Passionate people-leader – team-centered, goal-oriented, and driven to succeed.

**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)

**Programming Languages:** Python, SQL, R, Bash/Shell, Julia, Mathematica

**Other Tools and Skills:** Amazon Web Services (AWS) Cloud, Azure Cloud Services, Git, MLFlow, Agile, PyTorch, TensorFlow, Spark, Docker, Kubernetes, Google Apps Script

**Employment Experience**

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

* Scientist project lead for Labor Relations Q&A Chat Bot
  + developed novel RAG algorithm and vector database approach; implemented in Azure via OpenAI
* Scientist project lead for LLM-enabled AI Sales Assistant for used-vehicle inventory with CarBravo
  + Developed new algorithms to extract customer product preferences from conversation and developed novel algorithm for optimal follow-up question generation.
* Scientist project lead for machine learning projects for CarBravo - GM’s used vehicle marketplace
  + Developed probabilistic deep-learning time-series forecasting model for use in inventory management.
  + Developed statistical model isolating causal effects of vehicle attributes on days-to-sell.
  + Created an interpretable single-score heat index for used-vehicle sales using ELO theory.
* Helped develop autoencoder neural network model for anomalous driving detection.
  + Productionized model via webserver in Azure Kubernetes Service

**Data Scientist – Bayer Crop Science** [2020– 2022]

* Developed model for high-dimensional correlation modeling via copula theory used to forecast risk in portfolio of correlated stochastic revenue and cost sources.
* Developed discrete-choice utility models used for sales forecasting and setting product prices.
* Team expert in AWS cloud services – earned AWS Certification in Machine Learning Specialty (expired 2023, ID#RX11FD2CEB4E1WKF)

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

* Maintained Python data pipeline and dashboard to ingest, analyze, and visualize asynchronous student progress.

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

**Other Projects**

**Project Lead for image recognition project with TrainX and Project Green Light** [2019]

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