Jacob Z. Eliason

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Based in Washington, DC, USA
US Govt Clearance Level: Secret

SUMMARY

I'm a data scientist with a background in statistics and expertise with applied deep learning and generative AI tools. During my graduate studies in 2023 I pursued coursework in artificial intelligence and cloud computing to complement my background in traditional statistics. In my current role, I've developed Python-based automation tools in Azure and achieved Databricks certification, demonstrating my ability to write production-grade code in a mature development environment.

EDUCATION

The London School of Economics and Political Science — London, United Kingdom
M.Sc. Statistics — Sep 2022 – Aug 2023

- Relevant coursework: Statistical Inference, Generalized Linear Modeling, Bayesian Machine Learning (used Stan, PyMC), Distributed Computing (used GCP), Deep Learning (used TensorFlow)
- Project: *Comparing Deep Learning Approaches to Image Segmentation for Deforestation Detection*
  - Developed deep learning models using Python and TensorFlow for segmenting satellite images
- Dissertation: *Estimating the Causal Effect of German Nuclear Plant Closures on Electricity Generation Using Gaussian Process Regression*
  - Employed causal inference methodologies and Bayesian machine learning modeling techniques (using Python: `GPy`; R: `bsts`, `CausalImpact`) to analyze energy data

Brigham Young University — Provo, Utah, United States
B.S. Statistics — Jan 2016 – Dec 2019

- Minors: Mathematics, Political Science
- Relevant coursework: Intro to Bayesian Statistics, Applied Bayesian Statistics (used RStan), Analyis of Correlated Data

EXPERIENCE

Guidehouse — Arlington, VA, USA
Data Scientist – Senior Consultant — Aug 2023 – Present

- Developed, deployed, and maintained the backend of a reporting tool for a US Department of State client in Python using Azure Cloud used by several hundred employees
- Contributed research to improve the factual accuracy of internal LLM tooling
- Used Python, Azure

DevTech Systems, Inc. — Arlington, VA, USA
Statistician — Feb 2022 – Aug 2022

- Wrote R code to apply statistical disclosure limitation methods with `sdcMicro` to agency data assets to satisfy `k`-anonymity and reduce risk

United States Census Bureau — Suitland, MD, USA
Mathematical Statistician — Sep 2020 – Feb 2022

- Wrote and edited programs in SAS using SQL for production work on the Survey of Income and Program Participation; responsibilities included sampling, weighting, and variance estimation
- Used SAS, SQL, R

Y2 Analytics — Salt Lake City, UT, USA
Data Analyst — Jan 2020 – Aug 2020

- Contributed to elections modeling effort by modeling education and turnout using hierarchical Bayesian model
- Conducted survey research projects for corporate and municipal government clients from start to finish: programmed questionnaires in Qualtrics, cleaned survey data using `y2clerk`, produced graphics using `ggplot2`, analyzed relationships using conjoint analysis and other statistical modeling tools, and wrote text for final deliverables

Data Analyst Intern — Washington, DC, USA
May 2019 – Aug 2019

- Wrote new functions and corresponding unit tests for in-house R package which are still used years later by 10+ analysts

SKILLS

- Programming
  - Languages: Python, R, SQL, Stan
  - Version Control, Testing
  - Cloud: Azure, GCP
  - Scripting: Unix Shell
- Data Management & Engineering
  - Big Data: PySpark
  - Pipeline Orchestration: Dagster, Airflow
- Artificial Intelligence & Deep Learning
  - Frameworks: TensorFlow, PyTorch
  - Architectures: CNN, RNN, transformer
  - Tooling: LangChain
- Statistical Analysis & Machine Learning
  - Theory: Probability and inference, hypothesis testing, Bayesian methods, linear and non-linear modeling
  - Application: generalized linear models, time series, causal inference, supervised & unsupervised ML

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