Daniel Silva-Inclan

badbayesian@gmail.com || 202.460.5534 || Chicago, IL
https://badbayesian.io/ || https://github.com/badbayesian/

EDUCATION

UNIVERSITY OF CHICAGO
M.S. in Computer Science,
High-Performance Computing
Mar. 2018 - Aug. 2020

B.S. in Statistics
B.A. in Economics
Sept. 2012 - May 2016

SKILLS

PROGRAMMING
Python (Pandas, SciPy, NumPy, sklearn)
R (tidyverse, shiny, leaflet, data.table)
git(Hub) • AWS • GCloud • (my)SQL
TensorFlow • (py/R)STAN • Docker • vim
Apache (Hadoop, Kafka, Spark, Hive,
HBase, HDFS, etc.) • GIS • LaTeX • bash
Go • C/C++ • Julia • Matlab • Stata

COURSEWORK

GRADUATE
- Machine Learning
- Applied Linear Methods
- Stochastic Processes
- Parallel Programming
- Product Management
- Big Data

UNDERGRADUATE
- Honors Economic Analysis (I-IV)
- Honors Econometrics (A & B)
- Honors Game Theory
- Accelerated Real Analysis (I-III)
- Time Series
- Professional Writing

OPEN-SOURCE

BUG FIXES/CONTRIBUTIONS
- ICSS: R package of Inclan/Tiao '93
- Tensorflow/privacy: ML and differential privacy models
- tigris/tidycensus: Tidystyle api for Census shapefile/US Census by Kyle Walker

HOBBIES

- Discord Moderator for Econ/Politics Youtuber with 1,000,000+ views
- Top 15% ranked player in Age of Empires 2 DE (Random Team Map)
- Sous Vide style cooking

WORK EXPERIENCE

PROJECTS OFFICER | International Monetary Fund (IMF)
Apr. 2021 - present | Washington, DC
Research Department under Chief Economist and Research Director Gita Gopinath, Assistant to the Director Emine Boz, and Economist Suman Basu.
- Developed a research pipeline to quickly analyze and diagnose multiple equilibria issues in each new proposed economic model – increasing research throughput (model iteration) from weeks to days and improving robustness of the research process.
- Built a parallelized 2-stage multistart optimization in Python and high dimensional diagnosing visualizations in R to develop previously mentioned research pipeline.
- Expanded development of the Integrated Policy Framework: the IMF's conceptual model for optimal monetary policy, capital controls, foreign exchange intervention, and macroprudential policy in the context of COVID-19.

RESEARCH ASSISTANT | Becker Friedman Institute
June 2018 - June 2020 | Chicago, IL
Open Source Economics Group under Director Richard Evans.
- Researched private and synthetic data generation process, and data deanonymization of sensitive tax data (PUF) in the context of differential privacy, k-anonymity, and Bayesian networks.
- Developed pipelines for private and synthetic data generation processes in R.
- Prototyped ML-based error correction pipeline for editing tax documents for the Internal Revenue Services (IRS) in Python.

DATA SCIENTIST | Civis Analytics
Sept. 2016 - Sept. 2017 | Chicago, IL
Research and Development Causal Inference team.
- Developed and presented a snack advertisement pipeline for a Fortune-50 food company and Boston Consulting Group to cluster and visualize customer segmentation and determine opportunities for digital advertisement.
- Prototyped media-mix pipeline to verify effectiveness of Verizon digital marketing campaigns through heterogeneous treatment effect modeling.
- Researched and developed geospatial capabilities including a pipeline for spatial analysis (R, Python, QGIS, PostgreSQL), and an interactive map plotting tool for internal and external use.

HONORS ECONOMICS THESIS

Housing Market with Schelling Segregation
- Expanded Schelling Segregation model with economic controls of the city of Chicago and produced an open-source R package and RShiny app.
- Presented thesis at the 2016 Joint Statistical Meeting (JSM) of the American Statistical Association in Chicago. SPAAC Finalist.

EXTRACURRICULARS

HarrisHack 2020 (Team Captain with 4 other team members)
- Developed website and pipeline to create new compliant voting districts optimized across various anti-gerrymandering indices.

Teaching Assistant/Tutoring
- Teaching assistant for under-served high school students in Math and SAT prep at the University of Chicago's Collegiate Scholars Program (CSP) for two summers (2014 and 2015).
- Continued tutoring several students on a pro-bono basis after the CSP.