

Daniel Silva-Inclan

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EDUCATION

UNIVERSITY OF CHICAGO

M.S. IN COMPUTER SCIENCE

CONC: HIGH-PERFORMANCE COMPUTING

June 2018 - August 2020 | Chicago, IL

B.S. IN STATISTICS

B.A. IN ECONOMICS

2012 - 2016 | Chicago, IL

SKILLS

PROGRAMMING

Proficient:

Python (pandas, numpy, numba, sklearn)

R (tidyverse, shiny, leaflet, data.table)

Go • AWS • git • SQL • MySQL • bash

TensorFlow • STAN • Docker • vim

Apache (Hadoop, Kafka, Spark, Hive,

HBase, HDFS, etc.) • GIS • \LaTeX

C/C++ • Julia • Haskell • Scheme •

Matlab • Stata • Java

COURSEWORK

GRADUATE

Machine Learning

Applied Linear Methods

Stochastic Processes

Parallel Programming

Product Management

Big Data

UNDERGRADUATE

Honors Economic Analysis

Honors Econometrics

Time Series

Professional Writing

(Little Red Schoolhouse)

OPEN-SOURCE

BUG FIXES

Tensorflow/privacy – ML + differential
privacy models

tigris – Tidystyle api to Census shapefile

tidycensus – Tidystyle api to US Census

INTERESTS

Hobby chef exploring sous vide dishes

Top 10% Age of Empires 2 DE

(Random Team Map)

History and digital cartography

EXPERIENCE

RESEARCH ASSISTANT | BECKER FRIEDMAN INSTITUTE

June 2018 - June 2020 | Chicago, IL

Research Assistant in Open Source Economics Group.

- Developed parallelized and scaleable differentially private and synthetic data generation process for PUF dataset (tax data).
- Developed stop-gap data deanonymizer to process aggregated Census data for tax analysis.
- Developed ML-based error correction pipeline proposal for editing tax documents for the Internal Revenue Services (IRS).

DATA SCIENTIST | CIVIS ANALYTICS

Sept 2016 - Sept 2017 | Chicago, IL

Data Scientist in Research and Development team.

- Researched & developed geospatial capabilities including creating a pipeline of spatial analysis (R, Python, QGIS, PostgreSQL), and developed interactive map plotting tool for internal and external use.
- Developed unsupervised snack advertisement pipeline for Fortune-50 food company and Boston Consulting Group to cluster and visualize customer segmentation and determine opportunities for digital advertisement.
- Developed media-mix pipeline to verify effectiveness of Verizon digital marketing campaigns through heterogeneous treatment effect modeling.
- Developed app and report to score and visualize gerrymandering metrics across local and state jurisdictions in the US.

RESEARCH ASSISTANT | BECKER FRIEDMAN INSTITUTE

PROFESSORS VICTOR LIMA, GAURAB ARYAL, AND JOHN LIST

Apr. – May 2015, Apr. – Aug. 2016 | Chicago, IL

Research Assistant for various professors.

- Simulated Shapley-Shubik and Banzhaf power indices in R to analyze strength of political coalitions within the Chilean Government.
- Simulated a nonparametric price discrimination model in Matlab and R where consumers have multidimensional private information on several goods.
- Performed data entry and cleaning in Excel for major field experiment conducted in Chicago on the economics of early childhood interventions.

RESEARCH

HOUSING MARKET WITH SCHELLING SEGREGATION |

UNDERGRAD HONORS ECONOMICS THESIS

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)

Website and pipeline to create compliant voting districts optimized across various gerrymandering indices.

TUTORING

Tutored three under-served high school students in Math and SAT prep on pro-bono basis following my role as a teaching assistant at the University of Chicago's Collegiate Scholars Program for two summers.