

# FRANCINE STEPHENS

## DATA SCIENCE ANALYST | GEOSPATIAL ANALYTICS & DATA VISUALIZATION SPECIALIST

(210)885-0604 | francine.isabel.stephens@gmail.com | linkedin.com/in/francine-stephens | francine-stephens.github.io

---

### PROFILE

Integrity-driven data professional with 5+ years of academic and professional work experience; adept at conducting geospatial analytics at the neighborhood and market levels and designing insightful visualizations in static and interactive mapping applications.

### DATA SKILLS

- **DATA ANALYSIS TOOLS:** SQL, R (tidyverse), Python (Jupyter Notebooks), AWS, Git/GitHub, Command Line, SSH.
- **SPATIAL ANALYSIS TOOLS:** R (sf, tidycensus), ArcGIS Pro/Desktop (ArcPy), Google Earth Engine, Mapbox.
- **DASHBOARDING & VISUALIZATION:** Tableau, Qlik, Plotly, Leaflet, Flexdashboards (R), ArcGIS Story Maps, HTML, CSS.
- **DATA ANALYSIS TECHNIQUES:** Machine Learning Models, Predictive Analytics, Causal Analysis, Natural Language Processing.
- **GEOSPATIAL DATA TYPES:** Property, Land use, Addresses, Census/Demographic, Mobility/Foot-traffic, Satellite Imagery, GPS.

### DATA-RELATED EXPERIENCE

#### Graduate Research & Teaching Assistant | Stanford University 06/2018 – 12/2022

- Created new measures of exurbs using ML clustering techniques and analyzed residential demographic trends in urban, suburban, and exurban neighborhoods from 1990 to 2010.
- Developed analytical approach for studying spatial diffusion of gang-related language from Chicago's Southside using tweets.
- Designed a course website with 10 tutorials on web-mapping and analysis in ArcGIS Online that contributed to a 30% increase in students reporting "learning a great deal from the course".
- Ran weekly 2-hour virtual training and project consultation sessions for 4 GIS and research design classes of 20 to 60 students.

#### Research Scientist | Intuit 06/2021 – 05/2022

- Owned end-to-end analysis and dashboard reporting for 2 weekly surveys that informed company's return-to-work policies.
- Forecasted tech employee diversity hiring targets for next 3 years using company's employee acquisition modeling framework.
- Invented scalable automated web-data extraction process of online employee reviews that resulted in a new competitive intelligence tool that company continues to use each month.
- Introduced 3 new data visualizations in bi-annual talent report and presented results to C-suite level executives.

#### GIS/Spatial Data Analyst | Texas Democratic Party 08/2020 – 12/2020

- Owned daily polling place web-scraping, analysis, and reporting for Texas' 254 counties using Python code and AWS infrastructure. Trained voter protection team to leverage insights from polling place accessibility analysis in the team's advocacy strategy.
- Developed party's first scalable resource allocation model to assign volunteer poll watchers to polling places daily for 2 weeks.
- Designed all maps in post-election retrospective memo for party leaders using R spatial analysis and visualization packages.
- Conducted R&D on datasets and ML techniques to deploy in a scalable county-level redistricting process; prototyped data extraction, cleansing, and modeling process of potential redistricting boundaries for future redistricting cycles.

### EDUCATION

#### Ph.D. Sociology | Stanford University Expected 08/2023

Earned Cilker Award for Teaching Excellence. Awarded Outstanding Natural Language Processing Paper in the Social Sciences.

#### M.A. Sociology | Stanford University 06/2019

Relevant coursework in Advanced GIS, Data Science, and Research Design.

#### B.A. Sociology – Quantitative Methods | University of Pennsylvania 05/2017

Graduated *summa cum laude* and Phi Beta Kappa. Benjamin Franklin Scholar Honor Society Member.

---