

Jacob Ford

Data scientist with experience in machine learning, geospatial analysis and policy research

[[website](#)] . [[linkedin](#)] . [[github](#)] . [jake.ford927@gmail.com] . [724 681 3467]

EXPERIENCE

Solstice Power Technologies

Cambridge, MA (Remote)

Data Scientist

March 2022- Present

- Serve as an in-house data science and analytics expert, offering input on how existing data can be better leveraged to meet business needs, including data dashboards and analytics to inform progress on goals.
- Manage and maintain EnergyScore machine learning model, including calibration and validation, designing back testing process to prepare for commercialization, model performance analysis.
- Analyzed degree of bias within EnergyScore algorithm, quantifying degree to which protected classes face disparate thresholds by synthesizing leading fairness metrics into a research publication.

Durham-Carrboro-Chapel Hill Metropolitan Planning Organization

Durham, NC

Transportation Modeler

February 2020- March 2022

- Maintain and update regional transportation model providing predicted multimodal travel volume to support local, regional, state and federal funding of highway, transit and pedestrian networks.
- Apply advanced mathematical and machine learning techniques such as iterative proportional fitting, neural networks for multimodal choice, and decision tree models to determine the number and purpose of trips.
- Analyze and synthesize model scenario outputs using R and Python to build interactive data dashboards designed to increase accessibility, engage policymakers and to inform the public of trends in travel behaviors.

North Carolina General Assembly, Program Evaluation Division

Raleigh, NC

Program Evaluator

July 2018- February 2020

- Conducted comprehensive evaluations and recommend programmatic solutions for joint committee tasked with improving the effectiveness and efficiency of state policies to better serve constituents.
- Designed scripts in R to analyze and model future performance for programs of interest.
- Identified \$3.7 million in unnecessary state spending resulting from an errant matching mechanism for hurricane relief funding, allowing for future funds to be correctly utilized, resources conserved, and victims assisted.

AnLar, LLC

Rosslyn, VA

Statistician

May 2017- May 2018

- Lead data analyst responsible for statistical models for multiple reports published by the Institute for Education Sciences (IES) to identify trends in high school dropouts, college access, and financial aid.
- Designed survey weight methodologies, including bootstrap and balanced repeated replication techniques.
- Provided technical assistance and budgetary analyses for the State Early Childhood Advisory Council of Mississippi, meeting with leading legislators and policy makers to improve outcomes for students.

Cambridge Associates

Arlington, VA

Analyst

June 2014-August 2016

- Led team of four financial analysts in financial and regulatory research for nonprofit and endowments.

SKILLS

- Data science
- Machine learning
- ArcGIS, QGIS, GISDK
- Agile & Project Management
- Python (Scikit-learn, Pandas, NumPy)
- R (dplyr, leaflet, caret)
- Data Viz: Shiny, Tableau, Plotly, Leaflet
- Version Control and Git

EDUCATION

Georgetown University

McCourt School of Public Policy, Master of Public Policy

Baker Innovation Scholar: Managed \$20,000 project to decrease truancy rates for at-risk youth at Anacostia High School

Editor-in-Chief, Georgetown Public Policy Review

Research Fellow, Center for Research on Children in the United States

Washington, DC

May 2018

Allegheny College

Bachelor of Science in Mathematics, Minors in Economics and History

Meadville, PA

May 2014

PUBLICATIONS

Allison LaFave, Emily Kelly, and **Jacob Ford**, "Factors that Influence Student College Choice", National Center for Education Statistics (NCES), series NCES 2018-119, June 2018.

Allison LaFave, Emily Kelly, and **Jacob Ford**, "Reasons that High School Students Transfer or Become Homeschooled", NCES series NCES 2018-123, June 2018.

Laura White and **Jacob Ford**, "The U.S. Market for Defense-Related or Dual-Use Goods and Opportunities for Portuguese Small and Medium Size Enterprises: Competition and Demand" (2017), published by the Associação Empresarial de Portugal (AEP) and the Industry of Porto in March 2017, funded by the European Union (EU), The European Regional Developmental Fund.

Laura White and **Jacob Ford**, "The U.S. Market for Ornamental Stones and Opportunities for Portuguese SMEs: Competition and Demand – Volumes One and Two" (2016), published by AEP and the Industry of Porto in November 2016, funded by the EU, The European Regional Developmental Fund.

PROFESSIONAL CONFERENCES

"Bringing Community Perspectives to Community Solar: Expanding Equitable Community Solar by Centering Industry and Community Priorities". Presenter with Zahra Thani at Behavior, Energy and Climate Change Conference, Washington, D.C., November 13-16th, 2022.

"Use of Social Media to Promote Your Policy Research". Moderator and Panelist with Dr. Jennifer Doleac, Dan Kaplan, and Liza Morris at the Association for Public Policy and Management, Washington, D.C., April 6-7th, 2018.