

## Work Experience

### Director of Technology & Innovation

Washington, D.C.

ARAB BAROMETER, PRINCETON UNIVERSITY

September 2022 - present

- Decides the direction of Arab Barometer's technological advances by evaluating all new technology Arab Barometer adopts
- Develops strategies for survey programming & stress-testing, as well as processing & publishing incoming data
- Designs programming assessments for applicants & on-boarding materials for new hires
- Responsible for hiring, training, managing & mentoring Data Team members
- Coordinates with field partners across the Middle East & North Africa to assist with quality control, respond to real-time tech issues
- Represents Arab Barometer on various panels discussing Arab Barometer's data, particularly as it relates to views of gender dynamics
- Manages communications and expectations between data team members and the rest of the staff
- Designs programming assessments for applicants & on-boarding materials for new hires
- Creates & maintains database of 16 years of Arab Barometer data
- Manages communications and expectations between Data Team members & Media Team

### Senior Research Specialist

Washington, D.C.

ARAB BAROMETER, PRINCETON UNIVERSITY

August 2020 - September 2022

- Oversaw and aided in the development of custom data verification software used in real-time to evaluate the quality of incoming survey data
- Built custom graphing and statistical analysis R packages exclusively for Arab Barometer for both English and Arabic
- Created data processing pipeline that decreased time-to-publication by over six months
- Developed novel SMS messaging program in python to routinely deliver surveys across the Middle East and North Africa
- Designed and oversaw data processing pipeline for incoming data from 12 countries across three platforms with the use of Stata, R, and SPSS
- Created econometric models and data visualization to be presented at the US State Department, several US Embassies, the United Nations, & various international non-profits

### Doctoral Thesis Work

Rochester, New York

UNIVERSITY OF ROCHESTER

2013-2020

- Scraped original text data via multi-threading over a generated cluster of temporary, localized IP addresses with Microsoft Azure and Docker
- Utilized Optical Character Recognition (OCR) API on official government documents in Arabic to supplement missing information
- Built an Arabic-to-English dictionary using Google and Bing translator APIs
- Analyzed Irregular Time Series data to uncover temporal speaking patterns
- Uncovered unexpected gender dynamics in Middle Eastern semi-democratic parliaments

## Selected Presentations

### European Political Science Association

Glasgow, Scotland

NATURAL LANGUAGE PROCESSING FOR SHORT, ANONYMIZED SURVEY RESPONSES

June 2023

- Served as Panel Chair for New Developments in Text Analysis

### World Association for Public Opinion Research

Dubai, United Arab Emirates

NATURAL LANGUAGE PROCESSING FOR SHORT, ANONYMIZED SURVEY RESPONSES

November 2022

- Served as Panel Chair for Big Data, Sentiment Analysis, and Machine Learning

### World Bank

Washington, D.C.

HOW CAN FACTS HELP US BRING WOMEN INTO THE WORKFORCE IN MENA?

February 2023

- Reviews findings on gender attitudes from Arab Barometer Wave VII and historical data

### Middle East Institute

Washington, D.C. - Remote

GENDER ATTITUDES AND TRENDS IN MENA

October 2022

- Reviews findings on gender attitudes from Arab Barometer Wave VII

### United Nations

New York, NY - Remote

WOMEN AND COVID-19 IN MENA: FINDINGS FROM THE SIXTH WAVE OF ARAB BAROMETER

September 2021

- Co-presented with Dr. Amaney Jamal, Dean of Princeton School of Public and International Affairs
- Served as data analyst, presentation creator

## Skills

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### Programming

R: tidyverse, topicmodels, stm, quanteda, TensorFlow, zoo, arabicStemR, ggplot2;

python: numpy, pandas, TensorFlow, scipy, spaCy, gensim, matplotlib, multithreading, multiprocessing, selenium

### Software

Matlab, Mathematica, ArcGIS, Docker, Stata, SPSS, LaTeX, Excel

### Technical

Econometrics (Advanced), Time Series Analysis, Structural Estimation, Causal Inference, Machine Learning, Imputation, Web

Scraping, Natural Language Processing (NLP) in English and Arabic

## Education

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### University of Rochester

*Rochester, NY*

PH.D., M.A. IN POLITICAL SCIENCE

*2013 - 2020*

### University of Maryland, College Park

*College Park, MD*

B.S. IN PHYSICS (PRIMARY) AND GOVERNMENT & POLITICS (SECONDARY)

*2009 - 2013*