NICHOLAS REITH, PHD
Data Scientist

Austin, Texas
+1 646 821 1880
nreith@gmail.com
nicholasreith.com
github.com/nreith

1998 - 2002	2002 - 2004	2004 - 2005	2005 - 2010	2010 - 2017
B.A. - NYU New York, Paris, Madrid	M.A. - Georgetown U. Washington D.C., Damascus, Syria	Fulbright Fellowship Damascus, Syria Arabic Language	United Nations Beirut, Lebanon New York	Ph.D. - UT Austin Sociology, Quantitative Methods

DATA SCIENCE & PROFESSIONAL EXPERIENCE

DATA SCIENTIST
UT Austin | Summer 17 -

Building dashboard-style website with dynamic visualizations, summary data, and record lookup, with a SQL backend database.

Built dataset with millions of nonprofit IRS returns (100GB+).

Wrote Python code to flatten unstructured xmls into structured csv/SQL data. Wrote R analytics code.

Wrote optimized Linux/Bash code to improve the accuracy of messy csv data processing and reduce runtimes from weeks to hours.

DATA / STATS RESEARCH & CONSULTING
UT Austin | Jan 11 - May 17

Hired for data/programming skills by 4 Professors during 13 semesters as a Research Assistant.

Built 6 datasets with 100s of GB of data from many data types (structured, unstructured, spatial, network, demographic, temporal sources, etc.)

Fitted and interpreted complex models (network analysis, multi-level/mixed-effects regressions, and survival analysis, etc.).

Wrote R and Stata functions to perform custom calculations (e.g. a genetic algorithm to estimate network core-periphery position of nodes).

Developed a new method for diagnosing and imputing missing data in time-series, network data, using multi-level and Bayesian prediction.

Designed/programmed replicable data visualizations (2D, time-series, network, and maps).

DISSERTATION RESEARCH
UT Austin | Jan 12 - May 17

Built unique dataset by (1) geocoding map data, (2) reducing data of over 150gb, (3) government data in Arabic and French.

Predicted protest and violence during the Tunisian Revolution of 2010-11, with temporal and spatial effects, using time series and survival models.

Wrote up and presented methods/results for non-technical audiences, leading to 4 published, peer-reviewed journal articles.

Collaborated with experts in various fields.

Frequently consulted on data in department.

STATS & METHODS TEACHING
UT Austin | Jan 12 - May 17

Personally selected by Professors in several departments for expertise to assistant teach stats, programming, and methods for 6 semesters (4 for Ph.D. students, and 2 for undergrads).

Designed stats programming labs for Stata, still in use by Sociology Department.

PROGRAM & POLICY ADVISING
United Nations Development Programme | May 05 - July 10

Policy & program advisor to high-level UN officials working on political/economic development in Arab countries. Based in Beirut and New York.

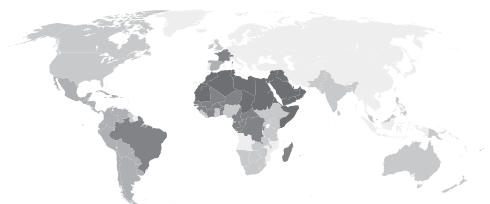Strategic planning & program management.

PROGRAMMING & TOOLS

R	
Python	
SQL	
Linux/Unix	
Tableau	
Stata	
LaTeX	

HUMAN LANGUAGES

Fluent in French, Spanish & English. Advanced Arabic.

STATISTICS

Regression and modeling techniques
Multi-level and simultaneous equations
Temporal and spatial modeling
Network analysis and metrics
Algorithms and modeling
Diagnostics: model fit/outliers/assumptions

DATA SKILLS

Data mining and dataset construction
Data wrangling/munging
Feature extraction/engineering
Missing data/imputation
Machine learning
Visualization