

Therese Anders

DATA SCIENTIST

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Experience

Apple Inc.

Cupertino, CA

DATA SCIENTIST

2020–present

- Service Analytics, Forecasting, and Efficiency team; forecasting network and infrastructure demand.
- Full-stack data scientist developing front- & backend of interactive dashboards in R and Shiny; putting dashboards into production.
 - Developed time series models, forecasts, & tools for automated anomaly detection.
 - Improved dashboard performance and UI/UX via Redis caching, JavaScript elements, effective reactive programming design patterns.
 - Designed interactive graphs and tabular displays to effectively visualize 1M+ data points.
- Generated and maintained ETL pipelines leveraging CI/CD tools, Docker, PostgreSQL, and S3 storage.
- Collaborated on R software development (internal packages, unit tests, version control via git/GitHub, documentation, code review).
- Authored internal blog posts and offered webinars to onboard team to new data science tools and programming principles.

Hertie School Data Science Lab

Berlin, Germany

DATA SCIENTIST | POSTDOCTORAL RESEARCH FELLOW

2019–2020

- Developed improved and extended estimates of GDP, population, and GDP per capita (1500-2019) via dynamic Bayesian modeling in Stan.
- Secured funding (\$10,000) for AWS compute and launched online help desk as data scientist for the SCRIPTS Data & Methodology Center.
- Supervised four research assistants and acquired funds (\$4,000) as co-PI on initiative computing underreporting in migrant fatality data.
- Boosted programming capacity of faculty and researchers by teaching 3 half-day data science workshops and consulting on statistical computing.

RStudio

Remote

SOFTWARE ENGINEERING INTERN

2019

- Engineered open-source software solutions for peer review of GitHub repositories via the ghclass R package (interfacing with the GitHub API).

University of Southern California (USC)

Los Angeles, CA

RESEARCH ASSISTANT

2014–2019

- Implemented and consulted on data management, statistical modeling, visualization, research design, and text analytics as lead data scientist.
- Co-authored five article-length publications and presented findings at leading academic conferences (NIPS, APSA, ISA, PolMeth, Peace Science).

USC Security and Political Economy (SPEC) Lab

Los Angeles, CA

DIRECTOR OF RESEARCH AND TRAINING

2016–2017

- Mentored 15+ research assistants and supported their professionalization by designing data science curriculum and teaching R programming.

Collaborative Research Center 700

Berlin, Germany

STUDENT ASSISTANT

2011-2013

- Managed promotional events and receptions (~200 participants) at large conferences; orchestrated doctoral career development workshops.

Education

University of Southern California

Los Angeles, CA

PHD POLITICAL SCIENCE & INTERNATIONAL RELATIONS

2020

Methodology certificate ('15); coursework in advanced machine learning, research design, Python

MA ECONOMICS

2015

Coursework in data visualization, business analytics, econometrics, machine learning

Freie Universität Berlin

Berlin, Germany

DIPLOM POLITICAL SCIENCE (MA EQUIVALENT)

2013

Duke University

Durham, NC

NON-DEGREE EXCHANGE (coursework in statistical analysis, maximum likelihood estimation)

2011

Universidad CEU Cardenal Herrera

Valencia, Spain

NON-DEGREE EXCHANGE

2010

Skills

R	Expert user, 10+ years of experience. Functional programming, package development, statistical modeling and forecasting, Bayesian models, machine learning, static & interactive visualization, data wrangling, spatial analysis
Shiny	Advanced user, 1+ years of full-time experience. Leveraging custom CSS, HTML, and JavaScript; database backends; caching; productionizing dashboards
Python	Data wrangling, NLP, visualization
SQL	PostgreSQL
CI/CD	git + GitHub, Jenkins
Containers	Docker
Other software	Stan, Stata, \LaTeX , Adobe Illustrator
Languages	English (proficient), German (native), Spanish (intermediate), French (basic)

Awards

- 2021 **Best Visualization Award**, Journal of Peace Research
- 2019 **Kenneth E. Boulding Award for best graduate student paper**, International Studies Association
- 2017, 2015 **Graduate student paper award**, International Studies Association West

Teaching

- **Data science workshop series for faculty and Ph.D. students** (Hertie School, 2020)
- **Advanced data visualization** (Florida State University Summer Methods School, 2019)
- **Math and quantitative methods for social science Ph.D. students** (University of Southern California, 2016–2019)
- **Maps in R** (USC, 2017)
- **Data visualization and management in R** (USC, 2016–2017)

Publications

- [1] New Estimates of Over 500 Years of Historic GDP and Population Data (with C. Fariss & J. Markowitz). *Journal of Conflict Resolution*. Accepted.
- [2] Deportation, Crime, and Victimization (with S. Roza & S. Raphael). *Journal of Population Economics*. 2021.
- [3] Territorial control in civil wars: Theory and measurement using machine learning. *Journal of Peace Research*. 2020.
- [4] Bread before guns or butter. Introducing Surplus Domestic Product (SDP) (with C. Fariss & J. Markowitz). *Intl. Studies Quarterly*. 2020.
- [5] Moral Hazard: German Public Opinion on the Greek Debt Crisis (with B. Rathbun & K. Powers). *Political Psychology*. 2019.

Presentations

- Geospatial data visualization (Apple SAFE Data Science Lunch & Learn, 2020)
- Peer review in data science courses (rstudio::conf, 2020)
- Territorial control in civil wars: Theory and measurement using machine learning (Intl. Studies Assoc. 2019, Am. Pol. Science Assoc. 2019, New Faces in Political Methodology 2019, Society Pol. Methodology 2018)
- Measuring territorial control in civil wars using Hidden Markov Models: A data informatics-based approach (Neural Info. Processing Systems, 2017)

[For complete list of teaching, presentations, and publications, see therese.rbind.io]