Tracy Duvall

Portfolio: https://tracyduvall.com/datasci/
TracyMDuvall@gmail.com

Summary: *Data scientist and social scientist employing quantitative methods to address complex analytical challenges. Proven ability to visualize data, develop data repositories, and produce recommendations in diverse domains, including public health and government operations. With a Master's in Analytics and a PhD in Anthropology, bring rigor and interdisciplinary creativity to projects.*

PROFESSIONAL EXPERIENCE

ArundelStat Performance and Data Analyst, *Anne Arundel County* (Annapolis, MD)
Jun 2022 – Sept 2024
- Evaluated the success of county programs, including cost-per-outcome
- Created visualizations of governmental data, including Tableau and ESRI dashboards
- Developed an open-data repository. Prototyped on CKAN, then chose ESRI Hub.
- Created data-wrangling scripts in Python
- Analyzed equity in the delivery of government services
- Created a quality-of-life index by census tract in Python and mapped results in ArcGIS Pro
- Employed GIS in analyses of the digital divide and of Latino demographics

Teaching Assistant, Introduction to Analytics Modeling, *Georgia Tech* (online)
Jan – Aug 2022

Public health researcher, *By contract from Social & Scientific Systems* (Kampala, Uganda)
May 2013 – Aug 2014
- Conducted a systematic review of research literature on condom use, including meta-analysis

Visiting Scholar, *University of Indonesia* (Depok, Indonesia)
May 2011– May 2012
- Evaluated the efforts of Bike2Work, an NGO, to promote bicycling

Asst Curator of Ethnohistory & Asst Prof of Anthropology, *U Arizona* (Tucson, AZ)
Jul 2000 – Jun 2003
- Placed historical databases online in searchable format
- Created online cataloguing systems using Microsoft Access

Principal Investigator, Archival Preservation, *U Arizona* (Tucson, AZ)
Jul 1999 – June 2001
- Developed a relational database and webform for cataloguing in Access (among other tasks).

Technical Writer, *Tulane University* (New Orleans, LA)
Aug 1988 – Aug 1990

EDUCATION

MS, Analytics – *Georgia Institute of Technology*
- Jan 2021 – Aug 2024 (graduated)

- 3.81 GPA
- Analytical Tools track
- Projects include:
  - Estimating remote work's effect on air pollution
  - Predicting hyperlocal weather from a regional forecast
  - Predicting health changes with a wearable tracker
  - Mapping optimal tree-planting locations to mitigate illness from extreme heat
  - Changes in inequality and its association with ethnicity, a comparison among counties

PhD and MA, Anthropology – *University of Arizona* (Aug 1991 – Dec 1998)
MA, History – *University of Florida* (Aug 1986 – May 1988)
BA, History – *University of Texas at Austin* (Jan 1982 – Dec 1985)

OTHER EDUCATION

- Deep Learning Specialization (17-week certificate, DeepLearning.AI via Coursera, 2024)
- Social Network Analysis (U Michigan via Coursera, 2012)
- Data Quality, M&E Frameworks for HIV/AIDS Programs (USAID, online, 2012)
- Introduction to GIS for Conservation (certificate – The Nature Conservancy et al., 2010)
- Outcome-based Evaluation of Projects (Institute for Museum & Library Services, 2001)

SKILLS

Analytical methods: Statistical modeling and machine learning, including Bayesian approaches; regression; time series and forecasting; causal analysis; classification; natural language processing (NLP); operations: optimization, simulation, change detection; hypothesis testing; data mining; working with big data; artificial intelligence; data engineering; data visualization

Computer languages: Python, R, SQL, D3.js (JavaScript, CSS, HTML5, and SVG), matplotlib, ggplot, JSON, some Scala

Software: Experience with SAS, SPSS, Arena, Access, Excel, GitHub, Hadoop, Spark, ESRI products including ArcGIS Pro, Tableau, Visual Studio Code, and cloud services, including AWS, Azure, Google Cloud Platform, and Databricks

Languages: English, Spanish, French, Portuguese, Italian, Indonesian

SELECT SERVICE

- User advocate, Empowering Community-Led Wellbeing Measurement (The Opportunity Project, Harvard Business School and U.S. Census Bureau, 2024)
- *Jurnal Antropologi*, University of Indonesia, editorial board member, 2012–2013.
- Judicial Performance Review, Pima County, public member, 2006.

PROFESSIONAL ASSOCIATIONS

American Statistical Association
Washington Statistical Society