

David Fox

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EXPERIENCE

[New Light Technology, Inc.](#) —Senior Analyst Modeler

September 2021 - Present

- Provide data development, analytics and data modeling support to the FEMA Response Geospatial Office.
- Developed an innovative method to dasymetrically allocate vulnerable population metrics for disaster response that is in production for all US declared disasters.
- Built online dashboards tracking nation resources and personnel for the FEMA Preparedness Office OneResponder program.
- Lead project to build webmap assets for the Center for Domestic Preparedness, converting legacy paper maps and data to reactive online maps to support training for disaster preparedness.
- Provide data review and interface with external FEMA data providers like Iceye(SAR) and SafeGraph (mobility data).
- Support project proposal development across New Light business sectors.

[Vermont Center for Geographic Information- Montpelier, VT](#) —Senior Geographer

July 2018 - September 2021

- Managed statewide parcel program. Coordinated data submissions from 255 Vermont towns. Resolved technical issues with data and supported use of the parcel data by State Agencies. Initial 3 year, \$3 million project brought in on time and 13% under budget.
- Part of the Agile team that developed ETL tools to feed the Department of Health COVID Dashboard
- Create publicly accessible web maps for open data like the Vermont Parcel Viewer (<https://maps.vcgi.vermont.gov/ParcelViewer>) and 3D Parcel Values (<http://maps.vcgi.vermont.gov/ParcelValuation3D>)
- Coordinate with the US Census on state level data updates, such as new construction programs and voting districts.
- Work with other agencies to develop geospatial data, such as the Department of Education school districts and Department of Tax Current Use program.

[County of Albemarle, Charlottesville, VA](#) — Neighborhood Planner

July 2017 - July 2018

- Created maps and spatial data in support of planning projects, including Board presentations, master planning, and community engagement materials.
- Staffed community advisory committees, facilitated community discussions of development projects, and developed online public engagement materials.
- Tracked current development, analyze patterns of development and demographics.
- Created population and employment forecasts, developed data and mapping products to support long range transportation modeling.

[Dept of Geography-Virginia Tech, Blacksburg, VA](#) — Teaching Assistant

August 2015 - May 2017

- Supported Faculty in delivering undergraduate education, including grading, discussion facilitation, and in class lecturing - awarded Graduate Teaching Assistant of the Year.
- Analyzed accelerometer data for a project assessing the movement patterns of students engaged in collaborative behavior.
- Evaluated open source road network routing solutions to support agent based modeling of forestry resource dynamics - worked with PostgreSQL and PostGIS on networks with millions of links.
- Created maps for introductory geography textbook.

[The Nature Conservancy, Charlottesville, VA](#) – Stewardship Scientist/Easement Program Manager
April 2007 - August 2015

- Collected, analyzed, and interpreted ecological monitoring data. Developed presentation materials and reports to share data internally and with partners, including preparation of grant reports.
- Created a GIS based ecological burn prioritization model adopted by the George Washington & Jefferson National Forests to guide prescribed fire planning.
- Conceived and executed the first analysis of TNC's national easement compliance statistics for risk factors for easement term violations and trends in overall compliance. Findings presented to TNC senior leadership and at a national level conference.
- Managed annual monitoring of over 140 TNC held conservation easements within Virginia. Responsible for all easement compliance resolutions and dispute resolution.

PUBLICATIONS

Fox, D.N., Baird, T.D., Stern, M.J. and Prisley, S., 2019. Where mobile groups settle: Spatial patterns and correlates of Maasai pastoralist sedentarization in Northern Tanzania. *Applied Geography*, 112, p.102086 <https://doi.org/10.1016/j.apgeog.2019.102086>

PRESENTATIONS

[Where are we at with "Where are we?"](#) - Vermont Association of Listers and Assessors, 2019

[Development Patterns and Future Growth in Albemarle County](#) - Joint meeting of the Albemarle Board of Supervisors, School Board and Planning Commission, 2018

[Settlement Patterns and Livelihood Outcomes among Maasai Pastoralists](#) - American Association of Geographers - Boston, MA, 2017

[Science Managers Can Use](#) - Panelist- TNC All Science Conference - San Jose, CA -2013

[Easement Compliance, What do the numbers tell us?](#) – Panel Lead-Land Trust Alliance Rally- New Orleans, LA 2013

[Promises and Perils of Conservation Easements](#) – Invited Lecture, University of Virginia- Charlottesville, VA 2012

[Vegetation Response to Prescribed Fire in the Warm Springs Co-Op](#) – Central Appalachians Fire Learning Network- West Virginia, 2011

EDUCATION

[Virginia Polytechnic Institute, Blacksburg, VA](#) – MS Geography

Thesis examined the impacts of resources access on settlement patterns and livelihoods in Maasai communities in Northern Tanzania.

[Virginia Polytechnic Institute, Blacksburg, VA](#) – Geospatial Information Technology Certificate

12 credit certificate including courses on geostatistics, remote sensing (including machine learning techniques), and GIS modeling.

[Edward Tufte Training Seminar](#) – Presenting Visual Information – Washington, D.C.

[University of Michigan, Ann Arbor, MI](#) – BS Anthropology, Environmental Studies

TECHNICAL SKILLS

R

Rstudio, packages including sf(spatial), tmap, mapview, mapdeck, R Markdown, Tidyverse

Open source

GeoDa, PostgreSQL, PostGIS, QGIS, Python including pandas, geopandas, jupyter notebooks

ESRI

ArcMap, ArcGIS Pro, Model Builder, Spatial Analyst, Network Analyst, ArcGIS Online, WebApp Builder, Experience Builder

Other

GIT, Inkscape, Affinity Designer, FME, Google Earth Engine, Mapbox, Power BI, Visual Studio Code, Azure Data Studio