

JIMMY FENG

p: 9178372772 | e: jfeng1996@gmail | s: jfeng12@vols.utk.edu | w: jimmyfeng.space | g: jimmy-feng.github.io

Third-year Geography PhD Student and Graduate Fellow at the University of Tennessee. Skills include **space-time GIS, Python, R, deep learning, text mining, and spatial analysis** for sustainable and socially equitable development and urban planning initiatives. **My proposed dissertation looks to develop a new theoretical framework for understanding access to various human needs** that relates together different concepts of space, time, and access. Focus is also given to identify how different types of data can be used to understand the different dimensions of access and their conceptual extensions and also how the proposed framework can be implemented with various methods to examine people's situations of access. A case study of food access will be used to apply these ideas in practice. **Formerly a geospatial consultant at (1) National Geographic Society's Geographic Visualization Lab**, delivering maps and reports of location analyses and strategically managing the development of a dynamically updated land-cover map of the world with partners at Google and World Resources Institute **and (2) the non-profit housing development organization Community Solutions**, spearheading the implementation of geospatial data analytics for land and property acquisition for affordable housing development.

EDUCATION

University of Tennessee, Knoxville | Anticipated May 2022 | GPA: 4.00

Doctor of Philosophy in Geography; Fast-Track PhD and awarded a four-year Graduate Fellowship

Knoxville, TN

Aug 2018 – Present

State University of New York at Geneseo

Bachelor of Arts in Geography – cum laude | Minors in Asian Studies & Urban Studies

Geneseo, NY

Aug 2014 – May 2018

CURRENT AWARDS

**\$9000 /
Year**

University of Tennessee, Knoxville Graduate Fellowship

Aug 2018 – May 2022

Four-year university graduate fellowship. This comes with a full tuition waiver and teaching assistantship.

Monetary figure represents the fellowship award only

\$8344

Thomas Graduate Fellowship

May 2020 – Apr 2021

Twelve months of support to pursue dissertation research

COURSES

MACHINE LEARNING

Deep Learning
Text Mining
Data Mining
Database & Big Data Tech.
Data Engineering &
Visualization
Bayesian Data Analysis

GIS | SPATIAL ANALYSIS

Seminar in GIScience
Geographic Info. Management
& Process
Applied GIS
GIS for Transportation
Quantitative Geography
Programming in GIS

URBAN DYNAMICS

Seminar in The Livable City
Seminar in Urban Issues
Seminar in Urban/Econ Geog.
Urban & Regional Planning
Geography & Planning in the
European Union
Space Time Human Dynamics

OTHER

Spatial Problems and Policies
Geographic Concept/Method
Seminar in Geography of
Transportation
Environmental Planning
Cartography
Geospatial Software Design

SKILLS

LANGUAGES

English	Native
Cantonese	Native
Mandarin	Basic

MAPPING/VISUALIZATION

ArcGIS (Desktop, Pro,
Online, StoryMap)
QGIS
TransCAD
Visualization: Dash | Plotly |
Matplotlib | Seaborn | Gephi

PROGRAM/SCRIPT

Python: scikit-learn, nltk,
keras, tensorflow, networkx
R: caret, tidyverse, sf,
ggplot
Google Earth Engine
MongoDB
SQL | PostgreSQL

OTHER

HTML
Adobe Creative Suite
Microsoft Office
Photography & Photo Editing
Git
GitHub
Command Line Interface

TEACHING EXPERIENCE

University of Tennessee, Knoxville, Department of Geography

Lead Instructor – GEOG311: Geovisualization and Geographic Information Sciences

Graduate Teaching Assistant – GEOG 411: Intermediate GIS

Graduate Teaching Assistant – GEOG 415: Quantitative Methods in Geography

Graduate Teaching Assistant – GEOG 311: Geovisualization and Geographic Information Sciences

Graduate Teaching Assistant – GEOG 101: World Geography

Knoxville, TN

CURRENT

SP 20

FA 19

SP 19

FA 18; FA 19

- Direct lab sessions; instruct students on fundamental programming, statistical, and research design concepts
- Use R programming to teach students about multivariate regression, hypothesis tests, and data structures
- Teach and assist students in GIS software and fundamental geographic and visualization concepts (e.g., data models, geographic data, spatial autocorrelation, coordinate systems, color theory, data classification)

PROFESSIONAL EXPERIENCE

National Geographic Society – Geographic Visualization Lab

Geoinformatics and Cartographic Consultant

Washington, DC

May 2019 – Sep 2019

- Conducted landscape survey of open-source, high-resolution global-scale remote sensing data for integration into Earth Pulse, a four-dimensional data-driven platform for senior-level conservation decision-making
- Cartographic and mapping work for publication materials and expeditions by National Geographic Explorers

Community Solutions

Consultant

Brooklyn, NY

Aug 2018 – Jan 2019

- Analyze and synthesize real estate data and community surveys in support of Community Solutions' community engagement and advocacy projects with local stakeholders
- Advise on land and property acquisition projects through geospatial analyses
- Maintain and update in-house geospatial data structures and database

Summer Geospatial Data Analyst, Real Estate and Community Development

May 2018 – July 2018

- Constructed a geospatial database detailing the housing landscape for land and property acquisition by the local Community Land Trust in Brownsville, Brooklyn, New York
- Developed a comprehensive report on the public housing conditions experienced by Brownsville residents, delivered to residents, local politicians and the regional HUD director at a Town Hall meeting

Geography Department, State University of New York at Geneseo

Department Assistant

Geneseo, NY

Aug 2017 – May 2018

- Collaborated with Geography teaching faculty to coordinate and organize the 2017 Middle States Division of American Association of Geographers Conference at SUNY Geneseo
- Streamlined daily workflow of Geography professors with technical expertise

New York City Department of Sanitation (DSNY) | Bureau of Recycling and Sustainability

Summer Operations Research Analyst

New York, NY

Jun 2016 – Aug 2016

- Beta tested an in-house database utilized for streamlined implementation of DSNY's Organics program
- Quantitative and geospatial analyses of socioeconomic and demographic data among the 59 community districts in NYC for report-making to the NYC Mayor's Office

RESEARCH PORTFOLIO

Human Dynamics of Scientific Knowledge

Graduate Research Assistant for University of Tennessee | PIs: Drs. Shih-Lung Shaw & Shellen Wu

Knoxville, TN

May 2020 – Present

- Developed Python scripts and functions to clean, pivot, geocode, summarize, and analyze three spreadsheets for further social network, natural language processing, and spatiotemporal/GIS analysis
- Create and maintain three space-time GIS layers and a ArcGIS geodatabase and project for spatiotemporal analysis of global collaborative human knowledge networks

Reorganizing National Geographic Society's Education Regions

Consultant Research Project for National Geographic Society Education

Washington, DC

Jul 2019 – Aug 2019

- Performed location analyses to reorganize existing management regions by the NGS Education team. Regions were centralized around air transportation hubs and states were allocated to regions by weighing population, drive-time, students, and state endowments in origin-destination cost matrix analyses
- Reorganization of these regions will augment a new strategy by NGS for outreach to extend geographic education and learning in schools and reach internal target goals by 2025

Extracting and Mosaicking Satellite Imagery for National Geographic Expedition in Severnaya Zemlya

- Procured high-res map layers for a Pristine Seas/Last Wild Places expedition in the Arctic: shaded relief map derived from GEBCO bathymetry data, cloud and ice free natural-color composite from Landsat-8, Sentinel-1 and -3 imagery, topographic map from averaging pixel values of the Sentinel-1 SAR band between 2014-18, and basemap from median pixel values of all Sentinel-3 RGB imagery in Sept. 2018

Washington, DC

Jul 2019

How well do various transportation services serve the diversity of neighborhoods in New York City?

https://static1.squarespace.com/static/5ba55b42a0cd277d52808e5c/t/5d8ce55d27bcd752d8b96621/1569514867386/GEOG_515_Report.pdf

Knoxville, TN

Dec 2018 – May 2019

- Network and statistical analyses identified an unequal distribution of public transit service provision in NYC. Multivariate regression analyses did not reveal a significant relationship between access to public transportation and minority populations at the public-use microdata area scale.
-