Rosanna Neuhausler

Working at the nexus of art, science, humanities, and tech.
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New York, NY

CURRENT POSITION

Environmental Systems Dynamics Lab, Berkeley, CA　　*2016 - 2023*
Ph.D. Candidate

Quantifying coastal land use change across of Oceania and SE Asia and its impact on coral reefs using remote sensing and in-situ spatiotemporal data.

Investigating high-order, nonlinear interactions using machine learning.

Processing terabytes of satellite data using Google Earth Engine and Apache NiFi.

As project manager, developed collaboration with NOAA and received funding from NASA for myself and undergraduate research assistant.

SELECT PROJECTS

Art Residency with L'AiR Art at Atelier 11, Paris, France　　*Summer 2022*
Explored science communication through art. Residency Bio

Face Recognition on the Edge, Berkeley, CA　　*Fall 2018*
Used edge AI to create a cloud-independent intruder detection system. Paper

Social Vulnerabilities, Superfund Sites, and Flooding Berkeley, CA　　*Spring 2017*
Compared discrepancies in social vulnerability indices associated with Superfund Sites and FEMA flood maps processed using R, GDAL library, and QGIS. RShiny App

PREVIOUS RESEARCH

Oxford University, Oxford, United Kingdom　　*2017- 2022*
Visiting Researcher (Summer 2017)

Explored phase shifts in reef-based interspecies competition and emergent patterning by developing a stochastic spatiotemporal model in python. Paper

Center for Catastrophic Risk Management, Berkeley, CA　　*2014 - 2015*
Research Assistant

Managed and processed spatial data in multi-server network using ArcGIS for study on the impact of sea level rise on the California's coastal infrastructure. Paper

Chinese University of Hong Kong, Hong Kong　　*Summer 2015*
Cal Energy Corps Intern

Developed MATLAB functions to semi-automate process of segmenting fisheye images for calculating the thermal effect of various building materials in urban heat island effect study. Poster, Blog

RESEARCH FUNDING

NASA FINESST	*2019 - 2022*
ISEECI Summer Research Grant	*2018*
NSF Research Traineeship Fellowship	*2017 - 2018*
EWJ Gateway Fellowship	*2016 - 2017*

TEACHING AND LEADERSHIP

Quantitative Environmental Problem Solving, Berkeley, CA
Spring 2022
Graduate Student Instructor

Introduction to Earth System Science, Berkeley, CA
Spring 2020, Fall 2018
Graduate Student Instructor

Data Science Boot Camp, Tokyo, Japan
Summer 2018
Assistant Data Science Instructor

Sagehen Natural Reserve Station Data Camp, Sierra Nevada
Summer 2018
Data Camp Organizer/Leader

EDUCATION

University of California, Berkeley

Ph.D. Geography, Earth System Science

Ph.D. minor Computational and Data Science and Engineering

2016 - Aug 2023

B.A. Urban Studies
B.S. Conservation & Resources Studies
2012 - 2016

SKILLS

Methodologies Data Science/Statistics, Remote Sensing, GIS, data pipelines

Technical Python, R, Git, JavaScript, MATLAB, ArcGIS, Google Earth Engine, Adobe Photoshop, Illustrator, QGIS

Language English, German, and Swiss-German.