

DANA PAIGE SEIDEL

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National Science Foundation Data Science Fellow & UC Berkeley PhD Candidate with 5 years experience in data wrangling and statistical modeling in R specifically for spatial and time series data.

RECENT PROJECT EXPERIENCE

Graduate Student Researcher: University of California, Berkeley

Fall 2014-Present

- Combined, cleaned, and analyzed movement data from 39 collared elephants - ~2M cleaned GPS samples - to understand space use, movement, and social structure.
- Developed program for updating spatial risk maps of Chronic Wasting Disease using rare events logistic regression and spatial libraries in Python and R
- Built spatiotemporal models estimating the prevalence and spread of Chronic Wasting Disease using a hierarchical Bayesian framework in WinBUGs and R
- Fit logistic regression models in R and ArcGIS incorporating mortality, environmental, and movement data to assess habitat selection decisions by zebra and interpolate space use across their range
- Built an agent based model in NOVA Modeller forecasting disease spread across a spatially and temporally dynamic landscape and the movement and infective state of a dynamic population of agents
- Developed protocol in R for standardizing fix-rate across datasets of 10K+ GPS relocations

Data Science Instructor: University of California, Berkeley

Fall 2017 - Present

- Graduate student instructor for upper division undergraduate & graduate level coursework teaching the fundamentals of collaborative and reproducible data science including basic programming in R & RStudio (using the tidyverse), relational databases, data management, version control, remote data and APIs, cloud computing, and R Markdown

Visiting Instructor: Hong Kong University Movement Ecology in R Workshop

January 2018

- Co-developed and led an 8-day workshop teaching graduate and post-doctoral students ecological methods of spatial and movement analysis in R and RStudio
- All teaching materials and activities made publicly available on [Github](https://github.com)

Quantitative Analyst Intern: Google Maps, GeoData Analytics Team

Summer 2016

- Explored impressions data for millions of features in the Google Maps database using Dremel, R
- Assessed average time to impressions maturity for novel business features using hazard models
- Fit mixed effect regression models and evaluated model capacity for predicting impressions of novel business features in 4 cities across US and India based upon spatial relations with mature features

Statistics Instructor: University of California, Berkeley

Fall 2015

- Graduate student instructor for upper division undergraduate/graduate statistics course including basic hypothesis testing, probability, experimental design, linear models, and programming in R & RStudio

Southwest Alberta Montane Research Project: University of Alberta

Fall 2011-Summer 2014

- Managed and analyzed movement data from 182 radio-collared elk - totaling 856K cleaned GPS samples.
- Designed database and analysis flow for foraging data across 14 tracked elk (15K relocations), 209 patches, and their environmental covariates including 345 unique plant species
- Implemented multivariate analyses in R to test theoretical model for forager home-range development, ultimately publishing 2 peer-reviewed papers using mixed negative binomial regression and paired conditional logistic regression

EDUCATION

University of California, Berkeley

PhD Candidate in Environmental Science, Policy, and Management

Fall 2014- Present

anticipated graduation date: Dec 2018

University of Alberta

Master of Science in Biological Sciences

Fall 2011-Summer 2014

Cornell University

Bachelor of Science in Natural Resources

Fall 2007-Spring 2011

Data Science for the 21st Century: National Science Foundation Research Traineeship

Software Carpentry Workshop: Berkeley Institute of Data Science

Fall 2015-Spring 2017

January 2016