

JACOB PETERSON

My career has given me experience applying a broad range of statistical and spatial methodologies and honed me into expert in R programming and working with GIS. Academic research has prepared me to think critically, learn new skills independently and quickly, manage complex projects, and collaborate within teams to achieve results. I enjoy exploring datasets, solving the puzzles that accompany analysis, and transforming raw data into the solutions used to answer important questions.

I am currently looking for a data science position that allows me to solve pragmatic problems while leveraging my skills in data management, GIS, and statistical analysis.

PROFESSIONAL EXPERIENCE

- 2019

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Graduate Teaching/Research Assistant

Purdue University

West Lafayette, IN

 - Led design and development of a spatially explicit agent-based model
 - Was the lead author on two grant application proposals
 - Managed collaborations between universities, state agencies, and private stakeholder organizations
 - Continued graduate coursework focusing in statistics and data science
- 2019
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2016

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Student Consultant

Oklahoma State University and Purdue University

 - Drew on my expertise in R programming, statistics, and GIS to assist other students, post docs, and research staff within my graduate schools
 - Consulting topics included: basic R programming, data cleaning, data management, statistical and spatial analysis
 - Led help sessions one on one and within small working groups
 - Provided detailed presentations about new techniques to lab research groups and graduate level classes
- 2018
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2016

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Graduate Research Assistant

Oklahoma State University

Stillwater, OK

 - Experience applying mixed-effect regression models and a variety of spatial movement and resource selection models
 - Designed a spatial classification function in R to characterize different animal behaviors given GPS movement data of an individual
 - Developed an R package to increase reproducibility of my research methods
 - Located, obtained, prepared, and managed large datasets from multiple state and federal agencies, private companies, and universities
 - Lead author on two academic manuscripts and multiple research summary reports
- 2016
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2015

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Field Technician - White-tailed Deer Capture

Missouri Department of Conservation

Rea, MO

 - Assisted in the capture and tagging of adult and neonate deer
 - Used VHF and Iridium GPS telemetry to monitor individual survival and movement patterns
 - Required adaptability and attention to detail to accomplish research goals when working in rough terrain and subject to variable weather patterns
- 2015
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2012

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Human Dimensions Technician

Colorado Parks and Wildlife

Fort Collins, CO

 - Assisted a variety of interdisciplinary projects in social science and natural resources
 - Created summary reports for survey results and conducted literature reviews
 - Designed and managed Access and ESRI geodatabases

CONTACT

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SOFTWARE SKILLS

Highly experienced with

- 📊

R [5+ years]
- 🌐

ArcGIS [8+ Years]
- 🐧

Linux/Bash [4+ years]
- 📄

R Markdown [1+ Years]
- 🔗

Github [4+ Years]
- 🖨

HPC Systems [4+ Years]

Experience with

- 🐍

Python [3+ Years]
- 🗄

SQL [5+ Years]
- 🗺

QGIS [2+ Years]
- 📊

Netlogo [6+ Months]
- 🌐





HTML/CSS [4+ Months]

TECHNICAL SKILLS

- Data Management
- Data Cleaning/Unit Testing
- Data Visualization/Cartography
- Data Mining
- Statistical Analysis
 - GLMs/GLMMs
 - Categorical Analysis
 - Multivariate Analysis
 - Machine Learning
 - Bayesian Statistics
- Spatial Analysis
 - Geospatial Operations
 - Interpolation
 - Space Use Models
 - Movement Models

PROFESSIONAL SKILLS

- Critical thinking
- Independent learning and researching
- Project management
- Working effectively in a team
- Collaboration with external agencies and stakeholders
- Prioritize stakeholder needs in development
- Oral and written communication adapted to target audiences

- 2015 • **GIS & Human Dimensions Independent Study**
Colorado Parks and Wildlife & Colorado State University  Fort Collins, CO
 - Began development of a method to spatially predict human attitudes and tolerance using survey response data
 - Experience using SQL to interface with a database and Python & R to script a spatially-explicit model
- 2015 • **NSF - Research Experience for Undergraduates Fellow**
University of Kansas  Lawrence, KS
 - Data-mined a fish stomach database using SQL and R to establish a food web for the North Atlantic Ocean and assess correlation between these interspecific relationships with meta-population synchrony
- 2014 • **Field Technician - Mule Deer Neonate Capture**
Colorado Parks and Wildlife  Piceance State Wildlife Area, CO
 - Assisted in the capture and tagging of neonate deer
 - Used VHF and Iridium GPS telemetry to monitor individual survival and assess cause of mortality
 - Experience working alone and as a small team in remote field locations
- 2014 • **Predictive Model for Archaeological Sites Affected by Flood Damage**
SIM Minor Capstone Project (CSU)  Fort Collins, CO
 - Designed a predictive model to locate prehistoric and historic cultural archaeological sites using spatial predictors
 - Developed using Python scripts and ArcGIS





EDUCATION

- Present | 2020 • **M.Sc., Applied Statistics and Analytics**
University of Kansas Medical Center  Overland Park, KS
 - Emphasis: Data Science
- 2018 | 2016 • **M.Sc., Natural Resources Ecology and Management**
Oklahoma State University  Stillwater, OK
- 2015 | 2012 • **B.S., Fish, Wildlife and Conservation Biology**
Colorado State University  Fort Collins, CO
 - Minor: Spatial Information Management (SIM)



TEACHING EXPERIENCE

- 2019 • **Vertebrate Population Dynamics**
Purdue Department of Forestry and Natural Resources  West Lafayette, IN
 - Teaching assistant for senior-level undergraduate course
 - Covered introduction to statistics and life tables in R, distance sampling using Program Distance and mark-recapture analysis with Program MARK
 - Experience teaching quantitative topics to a diverse non-expert audience
- 2019 • **Big Data in Forest Research - Guest Lecture**
Purdue Department of Forestry and Natural Resources  West Lafayette, IN
 - Guest lecture on using R as a GIS for a graduate course
 - Covered an introduction to the tidyverse, the differences between packages sp and sf, using package raster, and mapping with ggplot and tmap

PROFESSIONAL COMMUNICATION

- I have given talks about my graduate research at five professional conferences in the last two years
- I currently have two scientific articles up for peer-review in professional journals

ADDITIONAL INTERESTS

- Continued Learning - I am always in pursuit of new methods, code libraries, and ideas that could increase the efficiency or statistical rigor of my analyses.
- Scientific communication - I enjoy explaining complex problems, statistical analyses, and their results to non-specialists.
- FOSS - I am an advocate for free and open source options that allow fully reproducible science and help others learn.
- Teaching/Mentoring - I have a passion for helping others discover how scripting and programming can make themselves more efficient.

MORE INFO

See full CV at github.com/jacpete/Resume_CV/cv_Peterson.pdf for a more complete list of positions and experience.

Made w/ [pagedown](#).

Source code:

github.com/jacpete/Resume_CV.

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