

# Jonathan E Katz

[jonkatz2@gmail.com](mailto:jonkatz2@gmail.com) | 530.902.1622

## EDUCATION

### UNIVERSITY OF VERMONT

PHD, NATURAL RESOURCES

Grad. May 2015 | Burlington, VT

Cum. GPA: 3.99

### MIDDLEBURY COLLEGE

B.A., BIOLOGY

Grad. May 2002 | Middlebury, VT

Cum. GPA: 3.42

## COURSEWORK

Bayesian Statistics

Database Design for Environmental Data

Statistical Methods

Data Analysis & Graphics w/R

## SKILLS

R • shiny • Linear modeling •  $\text{\LaTeX}$   
 Markdown • Git • Excel • Access  
 Bayesian & frequentist statistics  
 Spatial analysis in R • MySQL  
 Stochastic & deterministic event modeling  
 Ubuntu/Linux • Mac OS • Windows  
 MongoDB • CSS • HTML5

## GRANTS

2009 - 2013 USDA Nat'l Needs Fellow

## WORKSHOPS LED

Year	Topic	Attendees
2014	Intr. to R	VT DFW
2013	Intr. to Access	UVM
2012	Intr. to Access	UVM
2011	Intr. to Access	UVM

## EXPERIENCE

### UVM | Post Doc. Res.: R PROGRAMMER & SHINY APP CREATOR

Nov 2014 – Present | Burlington, VT

- Translated spreadsheet algorithms into an R package (subm. to CRAN pending).
- Developed a dynamic shiny interface with sub-apps for analysis, visualization, report generation, and interactive surveys. The report component reads/parses/writes .md documents plus it incorporates graphical and tabular analytical output into a PDF, Markdown, or HTML report.
- Linked shiny apps to a MongoDB database and AWS EC2 storage to handle user permissions, analysis tracking, and output storage.
- Customized HTML and CSS elements to enhance default bootstrap layouts.
- Created portable shiny apps that can be used as desktop apps using portable R and portable Chrome, launched via an executable shell script shortcut.

### INDEPENDENT CONTRACTOR | DATABASE AND R CONSULTANT

Oct 2012 – Present | Burlington, VT

- Assisted the Wildlife Management Institute with an audit of the state of Minnesota deer population model, an R model used by the state Division of Fish and Wildlife to estimate the effect of hunting pressure on deer populations.
- Developed and deployed a MySQL schema and MS Access front-end to track inventory and sales for annual fundraisers by the Winooski Natural Resources Conservation District.
- Developed a MS Access database to track grant balance and quarterly reporting for the Wildlife Management Institute.

### UVM | RESEARCH ASSISTANT/DOCTORAL STUDENT

Sept 2009 – May 2015 | Burlington, VT

- Contributed a MySQL database interface to the R package 'monitoR', tools for automated sound detection and population monitoring.
- Explored models to evaluate species presence using automated acoustic detections.
- Oversaw data quality and storage for automated acoustic observations.

### MLJ-LLC | ENVIRONMENTAL SPECIALIST

Mar 2007 – Aug 2009 | Davis, CA

- Collected water samples for agricultural pollutant analysis.
- Coordinated sample delivery to and reporting from four laboratories.
- Contributed written summaries to monthly and annual reports for the California Central Valley Regional Water Quality Control Board.

## SELECTED PUBLICATIONS

- Katz, JE; TM Donovan. Occupancy monitoring with automated acoustic detections . In Prep.
- Brauer, CL, TM Donovan, BR Mitchell, JE Katz, and RM Mickey. In Press. A comparison of acoustic monitoring methods for common anurans of the northeastern United States. Wildlife Society Bulletin.
- Katz, JE; SD Hafner; TM Donovan. 2016. Tools for automated acoustic monitoring within the R package monitoR. Bioacoustics: The International Journal of Animal Sound and its Recording. 25:197-210. [DOI:10.1080/09524622.2016.1138415](https://doi.org/10.1080/09524622.2016.1138415)
- Katz, JE; SD. Hafner; TM Donovan. 2016. Assessment of Error Rates in Acoustic Monitoring with the R package monitoR. Bioacoustics: The International Journal of Animal Sound and its Recording. 25:177-196. [DOI:10.1080/09524622.2015.1133320](https://doi.org/10.1080/09524622.2015.1133320)