

# JACOB WITTMAN



## EXPERIENCE

- Current  
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2018
- **Private R and Statistics Tutor**  
Online 📍 Wyzant Tutoring
    - Provide individualized R and/or statistics tutoring sessions to students ranging from high school to graduate school.
- Current  
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2018
- **PhD Candidate**  
University of Minnesota 📍 Saint Paul, MN
    - Designed novel trapping experiment analyzed with non-linear Bayesian regression to determine the attractive range of a sex pheromone, which is used internationally by pest managers for efficient trap placement.
    - Forecast overwintering mortality of a parasitic wasp in North America using generalized estimating equation to target optimal release locations and improve establishment of this biological control agent.
    - Modeled the spread of emerald ash borer across North America using generalized additive models and simultaneous autoregressive models to allow communities to plan management tactics accordingly.
- 2018  
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2016
- **Graduate Research Assistant**  
University of Minnesota 📍 Saint Paul, MN
    - Evaluated the efficacy of regulatory requirements designed to reduce the spread of the invasive moth *Lymantria dispar* and recommended to state and federal employees that regulatory requirements be maintained.
- 2016  
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2014
- **Science Teacher (7 - 12 grade)**  
DREAM Technical Academy 📍 Willmar, MN
    - Developed project-based learning curriculum which aligned student projects and interests with state learning targets and outcomes.
    - Participated in faculty-led administrative structure. Served as chair of Technology Committee (2014 - 2016). Served on Personnel Committee (2014) and Facilities Committee (2015).
    - Held position as 'Convener Teacher' in 2015 - 2016 school year where I led all-staff meetings, attended district and state level meetings, and monitored and reported on school progress toward state goals.



## EDUCATION

- Current  
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2018
- **PhD, Entomology (graduate minor Biostatistics)**  
University of Minnesota 📍 Saint Paul, MN
    - Dissertation: Addressing outstanding questions related to the management of emerald ash borer *Agilus planipennis* (Coleoptera: Buprestidae)
    - Relevant coursework: Biostatistical Inference, Statistical Methods for Correlated Data, Biostatistical Modeling and Methods, Statistical Learning and Data Mining, Data Management for Biologists, Introduction to Bayesian Analysis, Spatial Biostatistics
- 2018  
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2016
- **MS, Entomology**  
University of Minnesota 📍 Saint Paul, MN
    - Thesis: Effects of host type and food deprivation on the movement behavior of late-instar larvae of gypsy moth *Lymantria dispar* (Lepidoptera: Erebidiae)
    - Relevant coursework: R for Natural Resource Sciences, Advanced R Programming, Statistics for Ecologists, Spatial and Temporal Analyses
- 2012  
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2008
- **BS, Biology, Environmental Studies (minor Secondary Education)**  
Luther College 📍 Decorah, IA

## CONTACT

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## SKILLS

Machine learning  
Experimental design and inference  
Bayesian and Frequentist statistical methods  
R  
R Shiny Dashboards  
git  
High Performance Computing  
Basic Python  
Basic SQL

For a complete list of experience, publications, presentations, and posters please visit my [full CV at my website](#).