

# Wyatt Madden M.S.

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Department of Microbiology & Immunology  
Montana State University  
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EDUCATION	<b>Montana State University</b> M.S. in Statistics	2017 – 2019
	<b>University of California, Santa Cruz</b> Bachelor of Arts, Mathematics & Economics <i>With Honors</i> Bachelor of Arts, Film & Digital Media <i>With Honors</i>	2011 – 2015
RESEARCH INTERESTS	Bayesian computation, spatio-temporal modeling, probabilistic machine learning & deep learning, data integration, Bayesian nonparametrics, variational inference and sequential Monte Carlo methods. Applications include viral surveillance, disease ecology, epidemiology and quality control.	
SUBMITTED MANUSCRIPTS	1. Hoegh, A., Peel, A., <b>Madden, W.</b> , Morris, A., Ruiz Aravena, M., Washburne, A., Plowright, R., “Estimating Viral Prevalence with Data Integration for Adaptive Two-Phase Pooled Sampling.”	
INVITED PRESENTATIONS	Compartmental Models: Deterministic & Bayesian Approaches Rocky Mountain Data Science Bozeman, Montana	Nov 2020
	R Studio in Action - DataFest Montana ASA Chapter Meeting Bozeman, Montana	Oct 2018
PROFESSIONAL EXPERIENCE	<b>Bozeman Disease Ecology Lab</b> Statistician	Bozeman, MT Jan 2019 – Present
	<ul style="list-style-type: none"><li>• Researched spatio-temporal data integration techniques for viral surveillance and prediction.</li><li>• Provided statistics &amp; machine learning consulting for international team of scientists.</li><li>• Developed R packages to automate routine statistical analysis, visualization, and wrangling.</li><li>• Designed and implemented SQL database and data pipelines, ensuring data quality and access.</li></ul>	
	<b>Weyerhaeuser</b> Statistics Intern	Seattle, WA May 2020 – August 2020
	<ul style="list-style-type: none"><li>• Implemented machine learning models aimed at lowering defects in industrial processes, after diagnosing issues through exploratory visualization and analyses.</li><li>• Formulated mixed-model experimental designs.</li><li>• Developed Shiny web applications to automate data cleaning/wrangling workflows.</li></ul>	
	<b>Accenture</b> Analyst	Sacramento, CA Jul 2016 – Apr 2017
	<ul style="list-style-type: none"><li>• Improved loan approval processes through analysis of credit profiles.</li></ul>	
CONSULTING & COLLABORATION EXPERIENCE	Collaborator Statistical Consulting And Research Services (SCRS) Department of Mathematical Sciences, Montana State University	Aug 2018 – Dec 2018
	Volunteer Statistics Without Borders (SWB) Under direction of Dr. Nicole Carnegie, Montana State University	Jan 2018 – Apr 2018

TEACHING	Instructor	<i>Fall 2017, Spring 2018, Fall 2018</i>
	MATH 105 - Contemporary Mathematics	
	Department of Mathematical Sciences, Montana State University	
AWARDS	Outstanding Graduate Student Award, Montana State University	<i>May 2019</i>
	Excellence in Data Visualization, ASA Data Fest - Montana State University	<i>Apr 2018</i>
SERVICE	Bozeman Environmental Statistics Group, Member	<i>2019 – Present</i>
	American Statistical Association Student Chapter at Montana State, Treasurer	<i>2018 – 2019</i>
MEMBERSHIP	American Statistical Association	