

Wyatt Madden M.S.

Grace Crum Rollins Room 233.A
Department of Biostatistics & Bioinformatics
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| EDUCATION | Emory University PhD in Biostatistics | 2021 – Present |
| | Montana State University MS in Statistics | 2017 – 2019 |
| | University of California, Santa Cruz BA, Economics & Mathematics <i>With Honors</i> BA, 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. | |
| PUBLICATIONS | 1. A. Hoegh, A. Peel, W. Madden , M. Ruiz-Aravena, A. Morris, A. Washburne, and R. Plowright, “Estimating viral prevalence with data integration for adaptive two-phase pooled sampling,” <i>Ecology and evolution</i> , vol. 11, no. 20, pp. 14 012–14 023, Sep. 2021, Full Paper . | |
| 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 | Bozeman Disease Ecology Lab Statistician | Bozeman, MT Jan 2019 – 2021 |
| | <ul style="list-style-type: none">• Researched spatio-temporal data integration techniques for viral surveillance and prediction.• Provided statistics & machine learning consulting for international team of scientists.• Developed R packages to automate routine statistical analysis, visualization, and wrangling.• Designed and implemented SQL database and data pipelines, ensuring data quality and access. | |
| | Weyerhaeuser Statistics Intern | Seattle, WA May 2018 – August 2018 |
| | <ul style="list-style-type: none">• Implemented machine learning models aimed at lowering defects in industrial processes, after diagnosing issues through exploratory visualization and analyses.• Formulated mixed-model experimental designs.• Developed Shiny web applications to automate data cleaning/wrangling workflows. | |
| | Accenture Analyst | Sacramento, CA Jul 2016 – Apr 2017 |
| | <ul style="list-style-type: none">• Improved loan approval processes through analysis of credit profiles. | |

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| CONSULTING & COLLABORATION EXPERIENCE | Collaborator | <i>Aug 2018 – Dec 2018</i> |
| | Statistical Consulting And Research Services (SCRS) | |
| | Department of Mathematical Sciences, Montana State University | |
| | Volunteer | <i>Jan 2018 – Apr 2018</i> |
| | Statistics Without Borders (SWB) | |
| | Under direction of Dr. Nicole Carnegie, Montana State University | |
| 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 | Emory BIOS Student Council, Pre-quals Representative | <i>Spring 2022 – Present</i> |
| | Georgia Statistics Day 2021, Student Volunteer | <i>October 11th, 2021</i> |
| | Bozeman Environmental Statistics Group, Member | <i>2019 – 2021</i> |
| | American Statistical Association Student Chapter at Montana State, Treasurer | <i>2018 – 2019</i> |
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| MEMBERSHIP | American Statistical Association | |