

CURRICULUM VITAE

MARTEN L. THOMPSON

657 NE Madison St Unit 1
Minneapolis, MN 55413

martenthompson.com
github.com/MartenThompson
martenthompson@gmail.com

EDUCATION

University of Minnesota, Minneapolis, MN

Ph.D. in Statistics. Advised by Dr. Snigdhansu Chatterjee

2018 - present

Hamline University, Saint Paul, MN

B.S. in Mathematics. Advised by Dr. Frank Shaw

2012 - 2016

B.A. in Physics. Advised by Dr. Andy Rundquist

2012 - 2016

University of York, York, England

Student in Mathematics.

2015

ABILITIES

Skills: Bayesian methodologies, MCMC, Gaussian processes, kernel regression, deep learning

Languages & Libraries: Python, R, C++, SQL, Java, TensorFlow, Git

EMPLOYMENT

UMN Statistical Consulting, Minneapolis, MN

Consultant to the Minnesota Department of Agriculture.

2019

The MDA began the Nutrient Management Initiative in 2006 to optimize fertilizer efficacy, groundwater quality, and cost. We applied penalized regression and Random Forest methodologies to the initiative's crop yield data to draw inference and make predictions in these three areas. The MDA used our findings to better inform their recommendations and data collecting practices for the next growing season, serving some 97 farmers and crop advisors.

Securian Financial Group, Saint Paul, MN

Associate Application Analyst.

2016 - 2018

Client meetings, code reviews, and production deployments were the work du jour at Securian. I developed web and batch applications to serve external customers and internal business needs. Soon after hire, I served on a committee overseeing all applications accessing a business unit's databases ensuring consistency, security, data integrity, and redundancy.

Alchemy Logic Systems, Santa Rosa, CA

Data Modeling Consultant.

2015 - 2018

I developed an anomaly detection method for incoming medical records to meet the best interests of the patient, practitioner, and platform. This relied on a simultaneous understanding of their needs and the information contained within extant historic records. Aspects of the final product are incorporated in the pending patent 14/996,067.

HONORS AND AWARDS

Interdisciplinary Health Data Competition , University of Minnesota Finalist team, 2nd place	2021
Bernard H. Lindgren Teaching Assistant Award , University of Minnesota	2020
Lund Speaking Competition , Hamline University 2nd Place	2016
Scholarships , Hamline University	
Fulford-Karp Scholarship	2014
Kent H. Bracewell Scholarship	2014
Dale Irwin Hayes Scholarship	2013
Presidential Merit Scholarship	2012

PATENTS

USPTO Application 14/996,067 <i>Methods of Obtaining High Accuracy Impairment Ratings and to Assist Data Integrity in the Impairment Rating Process.</i>	2016
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PRESENTATIONS AND INVITED TALKS

Joint Statistical Meeting - American Statistical Association <i>Network Autoregression of the COVID Burden</i>	2021
The American Physical Society - April Meeting <i>Computational Medical Apportionment Determination for Impairment Ratings</i>	2017
National Conference on Undergraduate Research <i>Modeling the Helicobacter</i>	2014
Physics Patrol Webinar <i>Invited speaker</i>	2014
Minneapolis College Housing Conference <i>Invited speaker</i>	2014

TEACHING

Instructor , University of Minnesota Python and Statistical Analysis Short Course (creator and instructor)	2021
Teaching Assistant , University of Minnesota	
STAT 4893W	2019 - 2021
STAT 3011	2019
STAT 3022	2018

PROFESSIONAL SERVICE

University of Minnesota

Graduate Student Liaison Committee - Member *2020 - present*

Hamline University

Hamline University Honors - Executive Committee Chair *2013 - 2016*

Society for Physics Students - Treasurer *2014 - 2015*

Residential Housing Assc. - Program Communications Coord. *2013 - 2014*

PROFESSIONAL SOCIETY MEMBERSHIP

Institute of Mathematical Statistics