

# CURRICULUM VITAE

## MARTEN L. THOMPSON

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Minneapolis, MN 55413

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## EDUCATION

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### 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

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

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

## EMPLOYMENT

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### 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.

## SOFTWARE

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Colab Spellcheck - Chrome Web Store 2021  
*github.com/MartenThompson/colab\_spellcheck*

## PATENTS

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USPTO Application 14/996,067 2016  
*Methods of Obtaining High Accuracy Impairment Ratings and to Assist Data Integrity in the Impairment Rating Process.*

## PRESENTATIONS AND INVITED TALKS

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Joint Statistical Meeting - American Statistical Association 2021  
*Network Autoregression of the COVID Burden*

The American Physical Society - April Meeting 2017  
*Computational Medical Apportionment Determination for Impairment Ratings*

National Conference on Undergraduate Research 2014  
*Modeling the Helicobacter*

Physics Patrol Webinar 2014  
*Invited speaker*

Minneapolis College Housing Conference 2014  
*Invited speaker*

## HONORS AND AWARDS

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**Interdisciplinary Health Data Competition**, University of Minnesota 2021  
Finalist team, 2nd place

**Bernard H. Lindgren Teaching Assistant Award**, University of Minnesota 2020

**Lund Speaking Competition**, Hamline University 2016  
2nd Place

**Scholarships**, Hamline University

Fulford-Karp Scholarship	2014
Kent H. Bracewell Scholarship	2014
Dale Irwin Hayes Scholarship	2013
Presidential Merit Scholarship	2012

## TEACHING

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**Instructor**, University of Minnesota 2021  
Python and Statistical Analysis Short Course (creator and instructor)

**Teaching Assistant**, University of Minnesota 2019 - 2021  
STAT 4893W

STAT 3011  
STAT 3022

2019  
2018

## **PROFESSIONAL SERVICE**

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### **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**

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Institute of Mathematical Statistics