

# Tom Hartvigsen

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[thartvigsen.github.io](https://github.com/thartvigsen)

RESEARCH INTERESTS: Representation Learning, Recurrent Neural Networks, Machine Learning for Healthcare.

## EDUCATION

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### Worcester Polytechnic Institute, Worcester, MA

Ph.D., Data Science

August 2016-Present

Advisors: Elke Rundensteiner, Xiangnan Kong

Thesis: *Recurrent Models for Irregular Time Series*.

M.S., Data Science

Dec 2018

Advisors: Elke Rundensteiner, Xiangnan Kong

Thesis: *Adaptive-Halting Policy Network for Early Classification*.

### SUNY Geneseo, Geneseo, NY

B.A., Applied Mathematics

August 2012-May 2016

BioMathematics minor

Advisors: Chris Leary, Kirk Anne

## PUBLICATIONS

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### PEER-REVIEWED CONFERENCE PROCEEDINGS

*Adaptive-Halting Policy Network for Early Classification*.

Thomas Hartvigsen, Cansu Sen, Xiangnan Kong, Elke Rundensteiner.

ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 2019.

*Comparing General and Locally-Learned Word Embeddings for Clinical Text Mining*.

Jidapa Thadajarassiri, Cansu Sen, Thomas Hartvigsen, Xiangnan Kong, Elke Rundensteiner.

IEEE International Conference on Biomedical and Health Informatics (BHI), 2019.

*Early Prediction of MRSA Infections using Electronic Health Records*.

Thomas Hartvigsen, Cansu Sen, Sarah Brownell, Erin Teeple, Xiangnan Kong, Elke Rundensteiner.

International Conference on Health Informatics (HEALTHINF), 2018. Short-listed for Best Student Paper.

*CREST - Risk Prediction for Clostridium Difficile Infection Using Multimodal Data Mining*.

Cansu Sen, Thomas Hartvigsen, Kajal Claypool, Elke Rundensteiner.

European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD), 2017.

### PEER-REVIEWED JOURNAL PROCEEDINGS

*Detecting MRSA Infections by Fusing Structured and Unstructured Electronic Health Record Data*.

Thomas Hartvigsen, Cansu Sen, Elke Rundensteiner.

To appear in Communications in Computer and Information Science.

### MANUSCRIPTS UNDER SINGLE-BLIND REVIEW

*Predicting Hospital-Acquired Clostridium Difficile Infection Using Electronic Health Record Information*.

Erin Teeple, Thomas Hartvigsen, Cansu Sen, Elke Rundensteiner.

### MANUSCRIPTS IN PREP

*Preserving Semantic Relationships in Multi-source Meta-Embeddings*.

Jidapa Thadajarassiri, Cansu Sen, Thomas Hartvigsen, Xiangnan Kong, Elke Rundensteiner.

## PROFESSIONAL EXPERIENCE

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**Machine Learning Research Intern**, UMMS, Mentored by Dr. Jomol Matthew  
**NSF REU Intern**, University of Arizona, Mentored by Prof. Shirley Papuga  
**Research Assistant**, SUNY Geneseo, Mentored by Prof. Chris Leary

Sep 2018 - May 2019  
Summer 2015  
Sep 2014 - May 2016

## SELECTED AWARDS

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<b>KDD 2019 Student Travel Grant</b> , ACM	August 2019
<b>Best Poster</b> , Graduate Research Innovation and Exchange, WPI	April 2019
<b>People's Choice Poster Award</b> , Graduate Research Innovation and Exchange, WPI	Feb 2017/18
<b>Community Citizen Award</b> , WPI	2017/18
<b>Graduate Student Travel Grant</b> , WPI	2017/19
<b>GAANN Ph.D. Fellowship</b> , US Dept. of Ed.	2016-2021

## TEACHING

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<b>NSF REU primary mentor</b> , WPI.	Summers 2017-19
<i>Students</i> : Y. Klindziuk, D. Johnston, L. Nazarov, J. Friend, A. Hauck, S. Brownell, S. Tocci.	
<i>Outcomes</i> : Three papers from two summers of advising – MIT URTC (2) HEALTHINF (1).	
<b>Teaching Assistant</b> , SUNY Geneseo, Modeling Bio. Systems (2x) and BioStats (1x).	Jan 2015-May 2016
<b>Modeling Biological Systems</b> , SUNY Geneseo	Spring 2016
<i>Guest lecturer</i> : taught Percolation Models, created and led in-class exercise using R.	