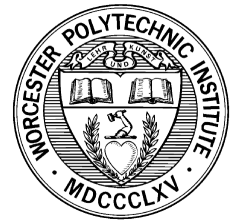


Thomas Hartvigsen

Ph.D. Student

Worcester, MA, USA

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Education

- **Worcester Polytechnic Institute** Worcester, MA
Ph.D. Data Science 2016 - Present
 - Advisor: Dr. Elke Rundensteiner
 - GPA: 3.83/4.00
 - Related coursework: Deep Learning, Statistical Learning, Knowledge Discovery and Data Mining, Big Data Management, Database Management Systems, Business Intelligence.
- **SUNY Geneseo** Geneseo, NY
B.A. Applied Mathematics 2012 - 2016
 - Minor in BioMathematics
 - GPA: 3.09/4.00

Experience

- **Graduate GAANN Research Fellow** Worcester Polytechnic Institute
Recurrent Models for Sequential Data Aug. 2016 - Present
 - Focus: recurrent neural network-based models to solve classification tasks for sequential data.
 - Current work: Early time series classification with application to infection diagnosis.
- **Research Experience for Undergraduates Intern** University of Arizona
Phenological Image Segmentation via Machine Learning Jan. 2015 - May 2016
 - NSF-funded research opportunity in the School of Natural Sciences and the Environment.
 - Segmented images with decision trees, studied how Creosote bushes change over drought seasons, found no relationship between ground-level photographs and satellite-level LIDAR imaging.
- **Research and Teaching Assistant** SUNY Geneseo
Math/Biology/English Departments Aug. 2013 - May 2016
 - Teaching assistant: Modeling Biological Systems/BioStatistics. Created and administered homework assignments, led two-hour workshop on percolation modeling.
 - Research assistant: Modeled infection spread on graphs, scraped graphs from IMDB, mined song lyrics for text features useful for discriminating genres and artists.

Programming Skills

- **Machine Learning and Data Analytics:** Python (PyTorch, TensorFlow, Scikit-Learn, Numpy, Pandas), R.
- **Data Visualization:** Matplotlib, Tableau, GGPlot2
- **Database Management:** PostgreSQL, MySQL

Publications

- **Hartvigsen, T.**, Sen, C., Rundensteiner, E. Detecting MRSA Infections by Fusing Structured and Unstructured Electronic Health Record Data. In submission to the Journal of Communications in Computer and Information Science, Springer.
- Teeple, E., **Hartvigsen, T.**, Sen, C., Rundensteiner, E. Risk Stratification and Diagnostic Performance of a Machine Learning Algorithm for Clostridium Difficile Detection Using Electronic Health Records Data. In submission to the Journal of Health Services Research and Managerial Epidemiology.
- **Hartvigsen, T.**, Sen, C., Brownell, S., Teeple, E., Kong, X. and Rundensteiner, E. Early Prediction of MRSA Infections using Electronic Health Records. BIOSTEC 2018 - Volume 5: HEALTHINF, pages 156-167, ISBN: 978-989-758-281-3. Nominated for Best Student Paper.
- Sen, C., **Hartvigsen, T.**, Claypool, K., Rundensteiner, E. CREST - Risk Prediction for Clostridium Difficile Infection Using Multimodal Data Mining. ECML/PKDD 2017.

Awards & Honors

- People's Choice Award for best poster, Graduate Research Innovation and Exchange 2017-18
- Government Assistance in Areas of National Need Fellowship 2016-18