

Travis Goodwin

Curriculum Vitae

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Education

- 2012–2018 **Doctor of Philosophy, Computer Science**, *The University of Texas at Dallas*.
2010–2012 **Master of Science in Computer Science**, *The University of Texas at Dallas*.
Specialized in Intelligent Systems
2007–2010 **Bachelor of Science, Computer Science**, *The University of Texas at Dallas*, *Magna Cum Laude*.

Ph. D. Dissertation

- Title *Medical Question Answering and Patient Cohort Retrieval*
Advisor Sanda M. Harabagiu
Description This dissertation explored novel approaches harness unstructured biomedical and clinical text to answer a variety of information needs.

Experience

- 2018–Present **Independent Research Scholar**, U.S. NATIONAL LIBRARY OF MEDICINE, Bethesda.
Developed novel deep learning models for predicting nosocomial infections from clinical narratives documented in ICU notes.
2015–2018 **Research Assistant**, UNIVERSITY OF TEXAS AT DALLAS, Dallas.
Worked on a Big Data to Knowledge (BD2K) project to automatically retrieve cohorts of patients described with natural language from a large collection of EEG reports.
2014–2015 **Teaching Assistant**, UNIVERSITY OF TEXAS AT DALLAS, Dallas.
Graded and intermittently taught courses on *Information Retrieval* and *Probabilistic Graphical Models*.
2012–2014 **Research Fellow**, UNIVERSITY OF TEXAS AT DALLAS, Dallas.
Developed systems for automatic patient cohort retrieval and clinical decision support while participating in National Institute of Standards and Technology (NIST) hosted public challenges.

Awards

- 2020 Fellows Award for Research Excellence (FARE) (NIH)
2019 AMIA Dissertation Award (First place)
2018 Clinical Research Informatics Distinguished Paper Award (AMIA Summits)
2017 Homer Warner Award (AMIA Symposium)
2016 Best Student Paper Award (ACM CIKM)

Fellowships

- 2019–Present **Independent Research Scholar Fellowship**, *U.S. National Institutes of Health*.
- 2018–2019 **Biomedical Informatics Postdoctoral Research Fellowship**, *U.S. National Library of Medicine*.
- 2012–2015 **Excellence in Education Doctoral Fellowship**, *University of Texas at Dallas*.

Select Journal Publications

- 2020 Travis R. Goodwin and Dina Demner-Fushman “A Customizable Deep Learning Model for Nosocomial Risk Prediction from Critical Care Notes with Indirect Supervision”, *Journal of the American Medical Informatics Association*, Volume 27, Issue 4, Pages 567–572, 2020.
- 2018 Travis R. Goodwin and Sanda M. Harabagiu “Learning Relevance Models for Patient Cohort Retrieval”, *Open Access Journal of the American Medical Informatics Association*, Volume 1 Issue 2, 2018.
- 2017 Travis R. Goodwin and Sanda M. Harabagiu “Knowledge Representations and Inference Techniques for Medical Question Answering”, *ACM Transactions on Intelligent Systems and Technology*, Volume 9 Issue 2, October 2017.
- 2017 Travis R. Goodwin, Ramon M. Maldonado and Sanda M. Harabagiu “Automatic Recognition of Symptom Severity from Psychiatric Evaluation Reports”, *Journal of Biomedical Informatics*, Volume 75 Pages S71-S84, 2017

Select Conference Proceedings (First-authored)

- 2020 Travis R. Goodwin, Max Savery, and Dina Demner-Fushman, “Towards Zero-Shot Conditional Summarization with Adaptive Multi-Task Fine-Tuning”, in *Findings of the Association for Computational Linguistics: EMNLP 2020*, Online, November 2020.
- 2019 Travis R. Goodwin and Dina Demner-Fushman, “Deep Learning from Incomplete Data: Detecting Imminent Risk of Hospital-acquired Pneumonia in ICU Patients”, in *Proceedings of the American Medical Informatics Association Annual Symposium*, Washington, DC, USA, November 2019.
- 2017 Travis R. Goodwin and Sanda M. Harabagiu, “Inferring Clinical Correlations from EEG Reports with Deep Neural Learning”, in *Proceedings of the American Medical Informatics Association Annual Symposium*, pp 770-779, Washington, DC, USA, November 2017 (**Homer Warner Award**)
- 2016 Travis R. Goodwin and Sanda M. Harabagiu, “Medical Question Answering for Clinical Decision Support”, in *Proceedings of the Twenty-fifth ACM International Conference on Information and Knowledge Management (CIKM 2016)*, pp 297-306, Indianapolis, Indiana, USA, October 2016. (**Best Student Paper Award**)

Professional Memberships

- 2019–Present JAMIA Student Editorial Board
- 2016–Present American Medical Informatics Association (AMIA)
- 2015–Present Association for Computing Machinery (ACM)
- 2016–Present ACM Special Interest Group on Information Retrieval (ACM-SIGIR)