

Ashton Williamson

Research Data Scientist @ MDI²

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OBJECTIVE

I'm interested in, and enthusiastic about, natural language processing and its application to the healthcare domain. In particular, I'm interested in efficient and explainable NLP approaches that support equitable, data-driven care.

EXPERIENCE

Research Data Scientist MDI ² , Boston Children's Hospital	April 2025 - Present Boston, MA
<ul style="list-style-type: none">Developing AI-powered pipelines to build clinical registries from unstructured EHR data.Benchmarking Large Language Models for clinical information retrieval.Compiling data for US News and World Report surveys	
Research Assistant MDI ² , Boston Children's Hospital	May 2024 - April 2025 Boston, MA
Graduate Research Assistant Clemson University	June 2023 - May 2024 Clemson, SC
<ul style="list-style-type: none">Advisors: Dr. Amy Apon and Dr. Nina HubigInvestigated knowledge-based methods for automated International Classification of Diseases (ICD) coding.	
Undergraduate Research Assistant Clemson University	June 2022 - May 2024 Clemson, SC
<ul style="list-style-type: none">Advisors: Dr. Amy Apon and Dr. Nina HubigInvestigated knowledge-based methods for automated International Classification of Diseases (ICD) coding.DuPont Award for Best Undergraduate Project	
NLP Research Intern Giant Oak Inc.	September 2022 - June 2023 Remote
<ul style="list-style-type: none">Investigated efficiency trade-offs in training long-context, transformer-based language models.Introduced a novel dataset for long-context named-entity recognition.	

EDUCATION

M.S. Computer Science , Clemson University Thesis: <i>Low-resource ICD Coding of Discharge Summaries</i>	2022 - 2024
B.S. Computer Science , Clemson University Minor in Mathematical Sciences	2019 - 2023

SKILLS

Programming/Scripting Languages	Python, SQL, Bash
Tools	Linux, Slurm, Git, Docker/Singularity, Streamlit
Languages	English, Spanish

PUBLICATIONS

Large Language Models for Zero-Shot Procedure Extraction in Orthopedic Surgery: A Comparative Evaluation Ashton Williamson, et al. 2025. Under review at *Lancet Digital Health*.

Sex Differences in Common Hip Disorders and Preservation Procedures among Pediatric and Young Adult Patients: A Natural Language Processing Analysis of 8,328 Patients Nazgol Tavabi, **Timothy Williamson**, et al. 2025. Orthopedic Research Society 2025 Annual Meeting [Abstract]. Poster presentation at ORS 2025.

Identifying Predictors Of Repeat Hip Preservation Procedures In Pediatric And Young Adult Patients: Insights From A Large-scale Analysis At A Tertiary-care Children's Hospital Nazgol Tavabi, **Timothy Williamson**, et al. 2025. Orthopedic Research Society 2025 Annual Meeting [Abstract].

Low Resource ICD Coding of Hospital Discharge Summaries Ashton Williamson, David de Hilster, Amnon Meyers, Nina Hubig, Amy Apon. 2024. *Proceedings of the 23rd Workshop on Biomedical Natural Language Processing*. Poster presentation at ACL '24.

Efficient Transformer Knowledge Distillation: A Performance Review Nathan Brown, **Ashton Williamson**, Tahj Anderson, Logan Lawrence. 2023. *Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing: Industry Track*. Poster presentation at EMNLP '23.

Applying GatorTron to Multi-Evidence Clinical NLI. Ahmed Alameldin, **Ashton Williamson**. 2023. *Proceedings of the 17th International Workshop on Semantic Evaluation*.

SERVICE

2025 Peer reviewer: *JAMIA Open*, *AAAI (Workshop on Health Intelligence)*

CERTIFICATIONS

Epic Systems Cogito Data Model, Caboodle Data Model, Clarity Data Model, Access Data Model