

# WILLIAM GANTT

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## EDUCATION

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- University of Rochester**, M.S., Ph.D. Computer Science Anticipated August 2024
- Advisor: Aaron Steven White
  - Thesis: *Human-Centric Document-Level Event Understanding*
- Bowdoin College**, B.A. Computer Science (honors), *cum laude*, *Phi Beta Kappa* May 2017
- Advisors: Clare Bates Congdon and Stephen Majercik
  - Thesis: *An Investigation of Genetics-Based Machine Learning as Applied to Global Crop Yields*

## INTERESTS

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Natural Language Understanding, Information Extraction, Machine Learning

## PUBLICATIONS

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\*Denotes equal contribution.

- **William Gantt**, Alexander Martin, Pavlo Kuchmiichuk, Aaron Steven White. 2023. Event-Keyed Summarization. *Under Review*.
- Siddharth Vashishtha, Alexander Martin, **William Gantt**, Benjamin Van Durme, Aaron Steven White. 2023. [FAMuS: Frames Across Multiple Sources](#). *Under Review*.
- **William Gantt**, Shabnam Behzad, Hannah YoungEun An, Yunmo Chen, Aaron Steven White, Benjamin Van Durme, Mahsa Yarmohammadi. 2023. MultiMUC: Multilingual Template Filling on MUC-4. *Under Review*.
- **William Gantt**, Reno Kriz\*, Yunmo Chen\*, Siddharth Vashishtha\*, Aaron Steven White. 2023. [On Event Individuation for Document-Level Information Extraction](#). *Findings of the Association for Computational Linguistics: EMNLP 2023*.
- Yunmo Chen\*, **William Gantt**\*, Tongfei Chen\*, Aaron Steven White, Benjamin Van Durme. 2023. [A Unified View of Evaluation Metrics for Structured Prediction](#). *Empirical Methods in Natural Language Processing (EMNLP)*.
- Yunmo Chen, **William Gantt**, Weiwei Gu, Tongfei Chen, Aaron Steven White, Benjamin Van Durme. 2023. [Iterative Document-Level Information Extraction via Imitation Learning](#). *European Chapter of the Association for Computational Linguistics (EACL)*. **Outstanding Paper Award**.
- **William Gantt**, Lelia Glass, Aaron Steven White. 2022. [Decomposing and Recomposing Event Structure](#). *Transactions of the Association for Computational Linguistics (TACL)*.
- Benjamin Kane, **William Gantt**, Aaron Steven White. 2021. [Intensional Gaps: Relating doxasticity, bouleticity, veridicality, factivity, and neg-raising](#). *Semantics and Linguistic Theory (SALT)*.
- **William Gantt**\*, Benjamin Kane\*, Aaron Steven White. 2020. [Natural Language Inference with Mixed Effects](#). *The Ninth Joint Conference on Lexical and Computational Semantics (\*SEM)*.

## WORK EXPERIENCE

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- Microsoft - Semantic Machines** Summer 2022  
*Research Intern* *Remote*
- Investigated and implemented techniques for calibration and constrained decoding for few-shot semantic parsing using large language models (GPT-3, Codex); improved top-*k* parsing accuracy by several points absolute on multiple datasets.
- Okta** July 2017 - July 2019  
*Software Engineer* *San Francisco, CA*

- Led development of Okta's authentication and authorization pipeline, including new frameworks for configurable authorization policies and HTTP callbacks.
- Developed an out-of-the-box self-service registration platform for web apps.

## SERVICE

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### Teaching Assistantship

- Machine Learning (CSC 246/446): Spring 2021
- Statistical Speech and Language Processing (CSC 248/448): Fall 2020
- Machines and Consciousness (CSC 191/291): Spring 2020

### Mentorship

- Alexander Martin (anticipated B.S. 2024)
- Weiwei Gu (M.S. 2022; now Ph.D. student at Arizona State)

### Department Service

- CS Department Graduate Student Representative: 2023-2024
- CS Department PhD Admissions Committee: 2023-2024

### Peer Reviewing

- ACL: 2023
- EACL: 2023-2024
- EMNLP: 2022-2023
- NAACL: 2021
- ACL Rolling Review: 2021-2024

## PROJECTS & DATA

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### Decompositional Semantics Initiative

- Dataset and toolkit for commonsense semantic annotations and semantic graphs on top of Universal Dependencies on the English Web Treebank.
- Core contributor to version 2.0 of the Decomp Toolkit.
- Lead developer of UDS-EventStructure dataset ([1])

### MegaIntensionality

- Co-developer of the MegaIntensionality dataset—a large collection of lexically-triggered belief and desire inferences across 725 English clause-embedding verbs ([2]).

### IARPA BETTER

- Multilingual information extraction (IE) and retrieval (IR) competition funded by IARPA.
- One of the lead developers on the IE team led by Benjamin Van Durme at Johns Hopkins.
- Led to multiple publications at top NLP venues ([3], [4], [5])

### MultiMUC

- Lead developer of the MultiMUC corpus, a set of translations of the classic MUC-4 template filling dataset into Arabic, Farsi, Mandarin, Korean, and Russian
- The only publicly available multilingual template filling corpus

### MUCSUM

- Lead developer of the MUCSUM dataset, a collection of summaries of all gold events in the MUC-4 corpus

## HONORS & AWARDS

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**Sproull Fellowship**

University of Rochester, September 2019

*The University of Rochester's most prestigious graduate fellowship, awarded to fewer than a dozen incoming PhD students on the basis of an outstanding academic record and unusual potential for graduate study.*

**NSF Research Traineeship**

University of Rochester, September 2019

*Full-stipend one-year fellowship awarded to a small set of PhD students in Computer Science and Brain and Cognitive Sciences, focused on computationally-oriented, interdisciplinary research training.*

**Computer Science Senior-Year Prize**

Bowdoin College, May 2017

*Awarded to the student who has achieved the highest distinction in the major program in computer science.*

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**INVITED TALKS****Structured Representation and Prediction for Document-Level IE**

U. Rochester, April 2023

*Second Workshop on Processing and Evaluating Event Representation (PEER 2023)*

**Decomposing and Recomposing Event Structure**

Cornell U., April 2022

*First Workshop on Processing and Evaluating Event Representations (PEER 2022)*

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**SKILLS****Programming Languages**

Python (expert)

Java, R, MySQL, C, C++, Bash (some experience)

**Tools & Libraries**NumPy, Pandas, PyTorch, HuggingFace, AllenNLP, AI2 Tango,  
Amazon Mechanical Turk, Git, Vim

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**SELECTED COURSEWORK****AI & NLP**

- [AGI Safety Fundamentals](#), [AI Governance](#), Deep Learning, Machine Learning, Machine Vision, Robotics, Statistical Speech and Language Processing

**Computer Science**

- Computational Complexity, Computer Networks, Databases, Data Management Systems, Data Structures, Design and Analysis of Efficient Algorithms, GIS Algorithms & Data Structures, Introduction to Systems, Optimization & Uncertainty, Programming Languages

**Mathematics**

- Discrete Mathematics, Linear Algebra, Multivariate Calculus, Probability, Random Processes, Statistics