

# WILLIAM GANTT

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## EDUCATION

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**University of Rochester**, M.S., Ph.D. Computer Science

Anticipated Spring 2024

- Advisor: Aaron Steven White
- Coursework: *Machine Learning, Machine Vision, Statistical Speech and Language Processing, Deep Learning, Data Management Systems, Semantic Analysis, Formal Semantics, Syntactic Theory, Computational Complexity, Programming Languages, Design and Analysis of Efficient Algorithms, [AGI Safety Fundamentals](#)* (external)

**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*
- Coursework: *Robotics, Optimization and Uncertainty, Introduction to Systems, Computer Networks, GIS Algorithms & Data Structures, Databases, Algorithms, Data Structures, Introduction to Computer Science, Linear Algebra, Statistics, Probability, Mathematical Reasoning, Multivariate Calculus*

## INTERESTS

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Natural language understanding, information extraction, machine learning

## 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 autoregressive 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 on Okta's [authentication and authorization pipeline](#) by developing new policy and HTTP callbacks frameworks.
- Developed an out-of-the-box self-service registration platform for web apps.

## SERVICE

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**Teaching and Mentoring**

*Teaching Assistant*

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

**Reviewing**

- Summer - Fall 2023: EMNLP 2023
- Winter - Spring 2023: ACL 2023
- Fall - Winter 2022: EACL 2023
- Summer - Fall 2022: EMNLP 2022
- Fall 2021 - Winter 2022: ACL Rolling Review (ad-hoc)
- Spring 2021: NAACL-HLT 2021 (emergency)

## PUBLICATIONS

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\*Denotes equal contribution.

- Yunmo Chen<sup>\*</sup>, **William Gantt**<sup>\*</sup>, Tongfei Chen<sup>\*</sup>, Aaron Steven White, Benjamin Van Durme. A Unified View of Evaluation Metrics for Information Extraction. 2023. *Under Review*.
- Yunmo Chen, **William Gantt**, Weiwei Gu, Tongfei Chen, Aaron Steven White, Benjamin Van Durme. [Iterative Document-Level Information Extraction via Imitation Learning](#). 2023. *European Chapter of the Association for Computational Linguistics (EACL)*. **Outstanding Paper Award**.
- **William Gantt**, Reno Kriz<sup>\*</sup>, Yunmo Chen<sup>\*</sup>, Siddharth Vashishtha<sup>\*</sup>, Aaron Steven White. [On Event Individuation for Document-Level Information Extraction](#). 2022. *Under Review*.
- **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**<sup>\*</sup>, Benjamin Kane<sup>\*</sup>, Aaron Steven White. 2020. [Natural Language Inference with Mixed Effects](#). *The Ninth Joint Conference on Lexical and Computational Semantics (\*SEM)*.

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## PROJECTS AND DATA

### [Decompositional Semantics Initiative](#)

- Dataset and toolkit for commonsense semantic annotations and semantic graphs on top of Universal Dependencies on the English Web Treebank.
- Co-lead developer on version 2.0 of the Decomp Toolkit.
- Lead author of UDS-EventStructure dataset.

### [MegaIntensionality](#)

- Co-developer of a large dataset of lexically-triggered belief and desire inferences across 725 English clause-embedding verbs. Part of the MegaAttitude project.

### [IARPA BETTER](#)

- Multilingual information extraction (IE) and retrieval (IR) competition funded by IARPA.
- One of the lead developers of the IE models for team led by Benjamin Van Durme at Johns Hopkins.

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## HONORS & AWARDS

### **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 (familiar);  
R, MySQL, C, C++, Bash (some experience)

**Tools & Libraries**

NumPy, Pandas, PyTorch, Hugging Face, AllenNLP, AI2 Tango,  
Amazon Mechanical Turk, L<sup>A</sup>T<sub>E</sub>X, Git, Vim