

# William Huang

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## Education

**New York University, Courant Institute**, New York, NY

Anticipated: May 2021

*M.S., Scientific Computing*; Cumulative GPA: 3.87

Relevant Coursework: Team Project Seminar in Crowdsourcing, Natural Language Processing, Natural Language Understanding, Deep Learning, Fundamental Algorithms, Programming Languages

**Cornell University, College of Engineering**, Ithaca, NY

May 2016

*B.S. with Honors, Operations Research Engineering*; Cum Laude

## Publications (\*Equal contribution)

- 2021 “Comparing Test Sets with Item Response Theory.” Clara Vania,\* Phu Mon Htut,\* **William Huang**,\* Dhara Mungra, Richard Yuanzhe Pang, Jason Phang, Haokun Liu, Kyunghyun Cho, and Samuel R. Bowman. *Association for Computational Linguistics (ACL; under review)*.
- 2021 “Does Putting a Linguist in the Loop Improve NLU Data Collection.” Alicia Parrish, **William Huang**, Omar Agha, Soo-Hwan Lee, Nikita Nangia, Alex Warstadt, Karmanya Aggarwal, Emily Allaway, Tal Linzen, and Samuel R. Bowman. *Association for Computational Linguistics (ACL; under review)*.
- 2021 “Types of Out-of-Distribution Texts and How to Detect Them.” Udit Arora, **William Huang**, and He He. *Association for Computational Linguistics (ACL; under review)*.
- 2020 “Precise Task Formalization Matters in Winograd Schema Evaluations.” Haokun Liu,\* **William Huang**,\* Dhara A. Mungra, and Samuel R. Bowman. *Empirical Methods in Natural Language Processing (EMNLP)*.
- 2020 “Counterfactually-Augmented SNLI Training Data Does Not Yield Better Generalization Than Unaugmented Data.” **William Huang**, Haokun Liu, and Samuel R. Bowman. *EMNLP Workshop on Insights from Negative Results*.

## Awards

2020 STAR Talk at New York Academy of Sciences’ Natural Language, Dialog and Speech Symposium. *Selected to present as one of the top eight out of 28 submitted abstracts.*

## Research & Professional Experience

**Machine Learning for Language (ML<sup>2</sup>)**, New York, NY

*Advised by Prof. Samuel R. Bowman*

Jun 2020 – Present

- Implemented natural language understanding (NLU) benchmarks to expand NYU’s **jiant** library
- Developed a script with Pyro to fit an Item Response Theory model to 18 Transformer model predictions on NLU benchmarks with Variational Inference
- Designed statistical and machine-learning based evaluations of crowdsourced data to measure expert intervention
- Researched properties of counterfactually-augmented data by testing RoBERTa models on out-of-distribution examples
- Coordinated several hundred training runs on a high performance computer cluster to train RoBERTa and BERT models on seven Winograd Schema Challenge (WSC) task formalizations

**American International Group, Inc (AIG)**, New York, NY

*Enterprise Risk Management Analyst II*

Aug 2016 – Jun 2019

- Managed quarterly capital estimation by coordinating with a multinational team and presenting updates to stakeholders
- Led a team of analysts to migrate AIG’s capital model to Python in collaboration with IT to streamline analysis

## Volunteer Experience

**NYU AI School**, New York, NY

Jan 2021

- Instructed lab sections with 50 students covering linear regression, classification, and natural language processing
- Held office hours to discuss course planning, common machine learning tools, and class materials

## Skills & Interests

**Technical Skills** Python • PyTorch • Pandas • Numpy • Transformers • Matplotlib • Pyro • Microsoft Office • L<sup>A</sup>T<sub>E</sub>X  
**Interests** Board Games • Skiing • Fantasy Football • Cooking