**Jared Fernandez**

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**EDUCATION**

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| Aug 2020 – Present | **Carnegie Mellon University: School of Computer Science**  PhD. in Language and Information Technologies  Advisors: Yonatan Bisk, Emma Strubell |
| Sep 2015 – Jun 2019 | **Northwestern University***, Magna cum Laude*  B.S. in Computer Science with Honors  B.S. in Electrical Engineering |

**PROFESSIONAL EXPERIENCE**

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| Nov 2019 – Aug 2020 | **Google, Software Engineer**   1. Pipelined and evaluated the effectiveness of various features for predicting user engagement with Search notifications. |
| Jun 2019 – Sep 2019 | **Google,** **Software Engineering Intern**  Host: Igor Poletaev (Dialogflow NLU)   1. Improved intent recognition and out-of-domain detection models used to process user conversations with enterprise chat bots. 2. Designed pipeline for domain adaptation and finetuning of sentence embedding models. Increased downstream intent recognition by +4.8% acc. |
| Jan 2017 – Jun 2019 | **Northwestern University*,*** *Research Assistant*  PI: Douglas Downey (WebSAIL Group)   1. Constructed novel methods for commonsense QA data generation through novel adversarial authoring [3] and generative data augmentation methods [4]. 2. Proposed weighted importance sampling techniques to select training data for RNN language models [2]. 3. Introduced compact signatures representations for sets of word embeddings Released open-source library for sharing and selecting embeddings online [1]. |
| Mar 2018 – Jun 2019 | **Northwestern University**, *Research Assistant*  PI: Thrasyvoulos Pappas   1. Designed efficient metrics for measuring perceptual texture similarity for use in image retrieval and segmentation. |
| Jun 2018 – Sep 2018 | **Google,** *Software Engineering Intern*  Host: Jess Lai (Google Assistant on Android Auto)   1. Improved query handling for Google Search and Assistant. Built new interfaces for submitting offline queries to improve discoverability for Assistant on Auto. |
| Jun 2015 - Aug 2015 | **SLAC National Accelerator Laboratory,** *Research Support Intern*   1. Analyzed and provided visualizations for x-ray diffraction patterns of high-temperature superconductors. |
| Jun 2013 - Aug 2014 | **Stanford University - School of Earth Sciences**, *Research Intern*  PI: Kimberly Blisniuk (Cosmogenic Radiation Lab)   1. Determined slip rates on the San Andreas Fault using mass spectrometry dating of Beryllium isotopes. |

**PUBLICATIONS**

1. ***Generative Data Augmentation for Commonsense Reasoning****.*

Yiben Yang, Chaitanya Malaviya, Jared Fernandez**,** Swabha Swayamdipta, Ronan Le Bras, Ji-Ping Wang, Chandra Bhagavatula, Yejin Choi and Doug Downey.

*Findings of the ACL: EMNLP, 2020.*

1. ***CODAH: An Adversarially Authored Question-Answer Dataset for Common Sense****.*

Michael Chen, Mike D'Arcy, Alisa Liu, Jared Fernandez**,** and Doug Downey.

*Workshop on Evaluating Vector Space Representations for NLP (RepEval),* 2019.

1. ***Sampling Informative Training Data for RNN Language Models.***

Jared Fernandez, and Doug Downey.

*Association of Computational Linguistics: Student Research Workshop (ACL SRW),* 2018.

1. ***VecShare: A Framework for Sharing Word Representation Vectors.***

Jared Fernandez,Zhaocheng Yu, and Doug Downey.

*Empirical Methods in Natural Language Processing (EMNLP)*, 2017.

**PRESENTATIONS**

1. ***Sampling Informative Training Data for RNN Language Models.***

Jared Fernandez, and Doug Downey.

*Midwest Speech and Language Days*, 2018.

**TEACHING EXPERIENCE**

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| Spring 2018  Fall 2017  Spring 2017 | **EECS 349: Machine Learning** *with Prof. Douglas Downey*  **EECS 212: Discrete Math** *with Prof. Aravindan Vijayaraghavan*  **EECS 348: Artificial Intelligence** *with Prof. Michael Rubenstein* |

**PROFESSIONAL SERVICE**

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| 2020 | **ACL Student Research Workshop,** *Program Committee* |
| 2019 | **Northwestern Eta Kappa Nu,** *Undergraduate Mentor* |
| 2018 | **Northwestern IEEE Student Chapter,** *External Vice President*  Organized reading group for discussions of research papers in Electrical Engineering and Computer Science. Led corporate outreach to coordinate tech talks & hackathons. |
| 2017 | **Northwestern IEEE Student Chapter,***Technical Program Director*  Oversaw redesign of the IE3 software development mentorship program with over 50 members. Project manager for machine learning & web development teams. |

**AWARDS & HONORS**

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| 2019 | **Northwestern University***, Computer Science Departmental Honors* |
| 2018 | **Tau Beta Pi Honor Society,** *Member*  **Eta Kappa Nu Honor Society,** *Member* |
| 2017 | **Northwestern University,** *Undergraduate Research Grant* |

**SKILLS**

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| Languages:  Packages/Frameworks: | Python, C, C++, C#, Java, MySQL, Matlab, HTML/CSS  PyTorch, TensorFlow, Keras, NumPy, Pandas, OpenCV, Android, Git, LaTeX |