

Jared Fernandez

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EDUCATION

- 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

- 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. **G-Daug: 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.
ArXiv Preprint, abs/2004.11546.
2. **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.
3. **Sampling Informative Training Data for RNN Language Models.**
Jared Fernandez, and Doug Downey.
Association of Computational Linguistics: Student Research Workshop (ACL SRW), 2018.
4. **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

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

PROFESSIONAL SERVICE

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

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

SKILLS

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