

# Jared Fernandez

☎ 408-832-3234 | ✉ jared.fern@u.northwestern.edu | 🏠 jaredfern.github.io | 📷 JaredFern | 🌐 FernJared

## Education

*Northwestern University*

B.S. IN COMPUTER SCIENCE WITH HONORS  
B.S. IN ELECTRICAL ENGINEERING

*Sept. 2015 - June 2019*

*GPA: 3.86/4.00, Major GPA: 3.91/4.00*

**SELECTED COURSEWORK:** Graduate Algorithms • Machine Learning • Artificial Intelligence • Statistical Pattern Recognition • Deep Reinforcement Learning • Probabilistic Graphical Models • Statistical Language Models • Advanced Computer Vision • Digital Image Processing • Digital Signal Processing • Databases • Probability • Linear Algebra

## Experience

**Northwestern EECS, RESEARCH ASSISTANT**

*Jan. 2017 - Present*

*Principal Investigator: Thrasyvoulos Pappas*

- Learning metrics for measuring perceptual texture similarity for image retrieval and segmentation

*Principal Investigator: Doug Downey (WebSAIL Group)*

- Exploring failure modes of question-answering systems & designing adversarially generated dataset for commonsense QA
- Investigating importance sampling to accelerate training of recurrent neural network language models
- Developed framework for rapidly sharing word embeddings online using compact embedding signatures

**Google, SOFTWARE ENGINEERING INTERN**

*June 2018 - Sept. 2018*

- Improved query handling on Google Assistant and the Android Google Search App
- Designed and built interfaces to improve offline discoverability for Assistant on Android Auto

**Northwestern EECS, TEACHING ASSISTANT**

*March 2017 - June 2018*

*Courses Taught: Machine Learning, Artificial Intelligence, Discrete Math*

- Graded course assignments and hosted weekly office hours to ensure understanding of concepts

**SLAC National Laboratory, RESEARCH SUPPORT INTERN**

*June 2015 - Aug. 2015*

- Analyzed and created visualizations for x-ray diffraction patterns of high temperature superconductors

## Publications

1. Michael Chen, Alisa Liu, **Jared Fernandez**, Mike D'Arcy and Doug Downey. "Analyzing Language Models for Common Sense: an Adversarially-Authored Dataset." **Under review** at NAACL-HLT, 2019.
2. **Jared Fernandez**, Doug Downey. Sampling Informative Training Data for RNN Language Models. Association for Computational Linguistics: Student Research Workshop (ACL-SRW), 2018.
3. **Jared Fernandez**, Zhaocheng Yu, Doug Downey. VecShare: A Framework for Sharing Word Representation Vectors. Empirical Methods in Natural Language Processing (EMNLP), 2017.

## Professional Activity

**Northwestern IEEE Student Chapter, EXECUTIVE BOARD**

*March 2016 - Present*

**EXTERNAL VICE PRESIDENT (2017-2018), TECHNICAL PROGRAM DIRECTOR (2016-2017)**

- Led corporate outreach to coordinate industry representative appearances at tech talks & hackathons.
- Taught development and data analysis skills as project manager for machine learning and webdev teams.

## Honors & Awards

**Tau Beta Pi Engineering Honor Society**, Member

*October 2018 - Present*

**Eta Kappa Nu (IEEE-HKN) Honor Society**, Member

*October 2018 - Present*

**McCormick Undergraduate Honors Program**, Northwestern University

*September 2015 - Present*

## Skills

**Programming:**

Python • C • C++ • C# • Java • MySQL • Matlab • HTML/CSS

**Packages & Frameworks:**

TensorFlow • NumPy • Pandas • OpenCV • Android • Git •  $\text{\LaTeX}$