

# Jared Fernandez

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## 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*

**COURSEWORK:** Graduate Algorithms • Machine Learning • Artificial Intelligence • Deep Reinforcement Learning • Probabilistic Graphical Models • Statistical Language Models • Computer Vision • Medical Imaging • Networking • Databases • Digital Signal Processing • Probability • Linear Algebra • Differential Equations

## Experience

**Google, SOFTWARE ENGINEERING INTERN**

*June 2018 - Sept. 2018*

- Improved handling of queries issued to Google Assistant and the Android Google Search App
- Designed and implemented visual interfaces to increase discoverability of offline functionality for Google Assistant on Android Auto

**Northwestern EECS, RESEARCH ASSISTANT**

*Jan. 2017 - Present*

*Principal Investigator: Doug Downey (WebSAIL Group)*

- Investigating importance sampling for accelerating training of recurrent neural network language models
- Developed framework for efficiently sharing word embeddings online using compact signature representations

*Principal Investigator: Thrasyvoulos Pappas*

- Investigating image processing techniques to design metrics for measuring texture similarity and perform texture retrieval

**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

**Stanford Earth Sciences, RESEARCH INTERN**

*June - August 2013, '14*

*Principal Investigator: Kim Blisniuk*

- Calculated slip rates on the San Andreas Fault with Beryllium isotope dating. Identified field locations for sample collection, and isolated samples for mass spectrometry.

## Publications

1. **Jared Fernandez**, Doug Downey. Sampling Informative Training Data for RNN Language Models. Association for Computational Linguistics: Student Research Workshop (ACL-SRW), 2018.
2. **Jared Fernandez**, Zhaocheng Yu, Doug Downey. VecShare: A Framework for Sharing Word Representation Vectors. Empirical Methods in Natural Language Processing (EMNLP), 2017.

## Professional Activity

**Eta Kappa Nu (HKN): Honor Society of the IEEE, MEMBER**

*October 2018 - Present*

**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.

## Skills

**Programming:**

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

**Packages & Frameworks:**

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