

# Jared Fernandez

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## Education

- Sep 2015 - Jun 2019 **Northwestern University**,  
B.S. in Computer Science with Honors  
B.S. in Electrical Engineering  
*Cumulative GPA: 3.86/4.00, EECS GPA: 3.91/4.00*  
  
Graduate-level Coursework: Graduate Algorithms, Probabilistic Graphical Models, Deep Reinforcement Learning, Statistical Language Models, Statistical Pattern Recognition, Advanced Computer Vision, Digital Image Processing

## Experience

- Mar 2018 – Present **Northwestern University**, Research Assistant  
*PI: Thrasyvoulos Pappas*  
1. Learning metrics for measuring perceptual texture similarity for performing image retrieval and segmentation
- Jan 2017 – Present **Northwestern University**, Research Assistant  
*PI: Douglas Downey (WebSAIL Group)*  
1. Designing framework for generating adversarial training data for question-answering systems.  
2. Investigating importance sampling to accelerate training of RNN language models.  
3. Developed methods for selecting optimal word embeddings for downstream NLP tasks and framework for sharing word embeddings online using compact embedding signatures.
- Jun 2018 – Sep 2018 **Google**, Software Engineering Intern  
*Host: Jess Lai (Google Assistant on Android Auto)*  
1. Improved query handling on Google Assistant and Android Google Search App.  
2. Built interfaces to improve offline discoverability for Assistant.
- Jun 2015 - Aug 2015 **SLAC National Accelerator Laboratory**, Research Support Intern  
1. Performed analysis 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 to date cosmogenic Beryllium isotopes

## 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.

## Presentations

1. [Jared Fernandez](#), Doug Downey. *Sampling Informative Training Data for RNN Language Models*. Midwest Speech and Language Days, 2018.

## Teaching Experience

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

## Awards

Oct 2018 – Present **Tau Beta Pi Honor Society**, *Member*  
Oct 2018 – Present **Eta Kappa Nu (IEEE-HKN) Honor Society**, *Member*  
Sep 2015 – Present **McCormick School of Engineering**, *Undergraduate Honors Program*  
Jun 2017 – Sep 2017 **Northwestern University**, *Undergraduate Research Grant*

## Leadership

Apr 2017- Mar 2018 **Northwestern IEEE Student Chapter**, *External Vice President*  
Led corporate outreach to coordinate industry appearances at tech talks & hackathons.

Apr 2016- Mar 2017 **Northwestern IEEE Student Chapter**, *Technical Program Director*  
Project manager for machine learning & webdev teams. Taught software engineering and data analysis skills. Winner of 2017 IEEE NU Project Showcase.

## Skills

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