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: 3.88/4.00, EECS GPA: 3.93/4.00*
	Selected Coursework: Graduate Algorithms, Probabilistic Graphical Models, Deep Reinforcement Learning, Statistical Language Models, Statistical Pattern Recognition, Advanced Computer Vision, Digital Image Processing, Optimization, Linear Algebra

Experience

Jan 2017 – Present	**Northwestern University**, *Research Assistant* PI: Douglas Downey (WebSAIL Group) 1. Designed novel adversarially generated dataset for commonsense question-answering. Explored failure modes of current neural QA systems. 2. Investigating importance sampling to accelerate convergence rates of RNN language model training. 3. Developed methods for selecting optimal word embeddings for downstream NLP tasks. Built framework for sharing embeddings online using compact signatures.
Mar 2018 – Mar 2019	**Northwestern University**, *Research Assistant* PI: Thrasyvoulos Pappas 1. Learning metrics for measuring perceptual texture similarity for performing image retrieval and classification
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 dating of Beryllium isotopes

Publications

1. **Jared Fernandez**, Zhaocheng Yu, Doug Downey. "VecShare: A Framework for Sharing Word Representation Vectors". *Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2017.
2. **Jared Fernandez**, and Doug Downey. "Sampling Informative Training Data for RNN Language Models." *Proceedings of ACL 2018, Student Research Workshop (ACL-SRW)*. 2018.
3. Michael Chen, Mike D'Arcy, Alisa Liu, **Jared Fernandez,** and Doug Downey. "CODAH: An Adversarially Authored Question-Answer Dataset for Common Sense." *To Appear in the Proceedings of the 3rd Workshop on Evaluating Vector Space Representations for NLP (RepEval)*. 2019.

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

Awards & Honors

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.

Travel Grants

Jul 2018 **Association for Computational Linguistics**, *Student Travel Grant*
Jul 2018 **Northwestern University,** *Conference Travel Grant*
Jul 2017 **Northwestern University,** *Conference Travel Grant*

Skills

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