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Education

University of California Berkeley

Berkeley, CA

Ph.D. CANDIDATE IN COMPUTER SCIENCE (ADVISED BY JITENDRA MALIK)

Aug 2017 - present

University of Pittsburgh

Pittsburgh, PA

B.S. IN COMPUTER SCIENCE AND NEUROSCIENCE, MINOR IN CHEMISTRY (GRADUATED SUMMA CUM LAUDE)

Aug 2012 - May 2016

Work Experience _____

Google Brain Mountain View, CA

SOFTWARE ENGINEERING INTERN

May 2018 - Sept 2018

• Proposed a loss-based alternative to batch normalization that is more robust to small batch size training

N RESIDENT Jun 2016 - Aug 2017

- Investigated tradeoffs between different recurrent neural network architectures
- Improved deep learning techniques for inferring latent dynamics from neural spiking data

University of Pittsburgh - Computational Biology Department

Pittsburgh, PA

SOFTWARE ENGINEER

Jan 2015 - Oct 2015

· Added features to JavaScript library for molecular visualization, such as implementing symmetry support and animated models

Publications ___

E. Kosoy, **J. Collins**, D. Chan, S. Huang, D. Pathak, P. Agarwal, J. Canny, A. Gopnik, J. Hamrick. Exploring exploration: comparing children with RL agents in unified environments. *International Conference on Learning Representations (ICLR) Workshop*, *Oral*, 2020.

- **J. Collins**, K. Xu, B. Olshausen, B. Cheung. Automatically inferring task context for continual learning. *Cognitive Computational Neuroscience (CCN)*, *Oral*, 2019.
- **J. Collins**, J. Balle, J. Shlens. Accelerating Training of Deep Neural Networks with a Standardization Loss. *Women in Machine Learning (WiML) Workshop*, 2019.
- C. Pandarinath, D. O'Shea, **J. Collins**, R. Jozefowicz, S. Stavisky, J. Kao, E. Trautmann, M. Kaufman, S. Ryu, L. Hochberg, J. Henderson, K. Shenoy, L. Abbott, D. Sussillo. Inferring single-trial neural population dynamics using sequential auto-encoders. *Nature Methods*, 2018.
- **J. Collins**, J. Sohl-Dickstein, D. Sussillo. Capacity and trainability in recurrent neural networks. *International Conference on Learning Representations (ICLR)*, 2017.
- J. Sunseri, M. Ragoza, **J. Collins**, D. R. Koes. A D3R prospective evaluation of machine learning for protein-ligand scoring. *Journal of Computer-Aided Molecular Design*, 2016.

Awards _____

	2017	NSF Graduate Research Fellowship Program , Three years of support for graduate study for
		students who have demonstrated potential for significant achievements in science and engineering
	2017	Berkeley EECS Excellence Award, Award for incoming graduate students with an outstanding
		undergraduate academic record
	2016	NCWIT Collegiate Award , Award for college women with outstanding technical accomplishments
		that demonstrate a high level of creativity and potential impact
	2016	NetApp Systems Research Award , Funding for undergraduate students to complete research in
		the area of computer systems
	2016	SGB Conference Travel Grant . Travel grant for undergraduate students presenting at a conference



Introduction to Artificial Intelligence

GRADUATE STUDENT INSTRUCTOR

University of California, Berkeley Spring 2020