Mike Wu

334 Jordan Hall
(858) 740-9967
wumike@stanford.edu
https://www.mikehwu.com

Education	**Stanford University**	2017 - Present
	Ph.D. in Computer Science	
	Advisor: Noah Goodman	
	Yale University, Hopper College	2012 - 2016
	B.S. with Distinction in Computer Science	
	Yale college council, science committee	
	University of Oxford, New College	2015
	1st mark in three courses in Computer Science	
	Oxford computing society	

Awards and Honors	AAAI Outstanding Student Paper	2019
	IDEO CoLab Fellow	2019
	AngelHack, Augmented Reality Category 1st place	2018
	NSF Graduate Research Fellowship	2017
	AMIA CRI Nominated for Informatics Award	2017
	API World Hackathon, Telesign API 1st place	2017
	Trueface.ai Hackathon, 1st place	2017
	HackMIT Top 8 Hacks, Dropbox API 1st place	2015
	Qualcomm QLiving Scholarship	2014
	Intel ISEF Semifinalist	2012
	Siemens Competition Semifinalist	2012
	Intel ISEF Finalist, 3rd place in Computer Science	2011
	XSEDE Best Student Poster	2011

Preprints

Mike Wu, Kristy Choi, Noah Goodman, Stefano Ermon. Meta-Amortized Variational Inference and Learning. In *ArXiv*, 2019.

Ali Malik, **Mike Wu**, Vrinda Vasavada, Jinpeng Song, John Mitchell, Noah Goodman, Chris Piech. Generative Grading: Neural Approximate Parsing for Automated Student Feedback. In *ArXiv*, 2019.

Mike Wu, Sonali Parbhoo, Michael C. Hughes, Volker Roth, Finale Doshi-Velez. Optimizing for Interpretability in Deep Neural Networks with Simulable Decision Trees. In *ArXiv*, 2019.

Mike Wu, Sonali Parbhoo, Michael C. Hughes, Ryan Kindle, Leo Celi, Maurizio Zazzi, Volker Roth, Finale Doshi-Velez. Regional Tree Regularization for Interpretability in Black Box Models. In *ArXiv*, 2019.

Conference and Journal Proceedings

Judith Fan, Robert X.D. Hawkins, **Mike Wu**, Noah Goodman. Pragmatic inference and Visual Abstraction Enable Contextual Flexibility during Visual Communication. In *Computational Brain and Behavior* (COBB), 2019.

Mike Wu, Noah Goodman, Stefano Ermon. Differentiable Antithetic Sampling for Variance Reduction in Stochastic Variational Inference. In *Proc. 22nd International Conference on Artificial Intelligence and Statistics* (AISTATS), 2019.

Mike Wu, Milan Mosse, Noah Goodman, Chris Piech. Zero Shot Learning for Code Education: Rubric Sampling with Deep Learning Inference. In *Proc. 33rd AAAI Conference on Artificial Intelligence* (AAAI), 2019. [**Oral Presentation (12 min).**] [**Outstanding Student Paper Award.**]

Mike Wu, Noah Goodman. Multimodal Generative Models for Scalable Weakly-Supervised Learning. *Proc. 32nd Annual Conference on Neural Information Processing Systems* (NeurIPS), 2018.

Mike Wu, Michael C. Hughes, Sonali Parbhoo, Maurizio Zazzi, Volker Roth, Finale Doshi-Velez. Beyond Sparsity: Tree Regularization of Deep Models for Interpretability. In *Proc. 32nd AAAI Conference on Artificial Intelligence* (AAAI), 2018. [**Spotlight Presentation (2 min).**]

Marzyeh Ghassemi, **Mike Wu**, Michael C. Hughes, Finale Doshi-Velez. Predicting Intervention Onset in the ICU with Switching Statespace Models. In *Proc. AMIA Summit on Clinical Research Informatics* (CRI), 2017. [**Nominated for Informatics Award.**]

Mike Wu, Marzyeh Ghassemi, Mengling Feng, Leo Anthony Celi, Peter Szolovitz, Finale Doshi-Velez. Understanding Vassopressor Intervention and Weaning: Risk Prediction in a Public Heterogeneous Clinical Time Series Database. In *Journal of the American Medical Informations Association, Volume 24, Issue 3, No. 1* (JAMIA), 2016.

Mike Wu, Madhu Krishnan. Edge-based Crowd Detection from Single Image Datasets. In *International Journal of Computer Science Issues, Volume 12, Issue 1, No. 1* (IJCSI), 2013.

Madhu Krishnan, **Mike Wu**, Young Kang, Sarah H. Lee. Autonomous Mapping and Navigation through Utilization of Edge-based Optical Flow and Time-to-Collision. In *ARPN Journal of Engineering and Applied Sciences, Volume 7, No. 12*, 2012.

Workshops	**Mike Wu**, Kristy Choi, Noah Goodman, Stefano Ermon. Meta-Amortized Variational Inference and Learning. *NeurIPS 2019 Workshop on Bayesian Deep Learning.* [**Spotlight Presentation (1 min).**]
	Mike Wu, Sonali Parbhoo, Finale Doshi-Velez. Beyond Sparsity: Tree Regularization of Deep Models for Interpretability. *NeurIPS 2017 Workshop on Transparent and interpretable Machine Learning in Safety Critical Environments.* [**Contributed Talk (10 min).**]
Patents	Frank Wood, **Mike Wu**, Yura Perov, Hongseok Yang. Computing engine, software, system and method. US Patent App. 15/465,131, 2017.
Teaching Experience	**Teaching Assistant**, Dept. of Computer Science, Stanford University Fall 2019 CS398: Computational Education (Chris Piech)
	Teaching Assistant, Dept. of Computer Science, Yale University Spring 2016

CPSC437: Operating System Concepts (Avi Silberschatz)

Teaching Assistant, School of Management, Yale University   Fall 2015
MGT656: Management of Software Development (Kyle Jensen)

Invited Talks	Stanford Computer Forum Annual Meeting, 2019.
	Human-Centered Artificial Intelligence Institute Symposium, 2019.
	Yale Technology Conference, Yale University, 2016.
	Probabilistic Programming Workshop, University of Southampton, 2016.

Conference Presentations

Judith Fan, Robert X.D. Hawkins, **Mike Wu**, Noah Goodman. Modeling contextual flexibility in visual communication. *Vision Sciences Society Annual Meeting* (VSS), 2018.

William Smith, **Mike Wu**, Yura Perov, Frank Wood, Hongseok Yang. Spreadsheet probabilistic programming. *Inaugural International Conference on Probabilistic Programming.* (PROBPROG), 2018.

Industry Experience

Facebook Applied Machine Learning (AML)   2016-2017
Visiting engineer building tools in computer vision.

Lattice Data   2016
Software engineer building weakly supervised classifiers.

Invrea (Inverse Reasoning)   2015-2017
http://invrea.com
Co-founder building a probabilistic programming language in Excel.

YHack   2013-2016
https://www.yhack.org
Co-founder building an international collegiate hackathon.

Ionis Pharmaceuticals   2013
Data science Intern building classifiers for drug design.