# Mike Wu

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**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**

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| 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 Intervation 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**, 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 a international hackathon.

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