Yiwei Yang

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Education

09/2015 – 05/2019 **University of Michigan**
Ann Arbor, MI B.S. in Computer Science and Engineering
Advisor: Prof. Walter S. Lasecki

Professional Experience

09/2015 – present **Crowds and Machines Lab, University of Michigan**
Ann Arbor, MI Research Assistant (Advisor: Prof. Walter Lasecki)
Developed crowd-powered systems that combine human and machine intelligence to solve a variety of problems ranging from sketching expressive animations to generating informative and easy-to-answer clarification questions

05/2018 – 08/2018 **IBM Research, Almaden**
San Jose, CA Research Intern (Advisor: Dr. Yunyao Li)
Introduced a novel interaction paradigm that leverages deep learning and NLP engineers to co-create an interpretable and generalizable model on sentence classification; this work is featured on IBM Research Blog (https://www.ibm.com/blogs/research/2019/07/heidl-acl2019/)

Research Projects

07/2019 – present **Generating User-efficient Clarification Questions**
U of M Worked on a human-machine hybrid approach that leverages human intelligence
Lead and ranking by information gain to select questions that balance the trade-off between information gain and answerability

05/2019 – present **Active Learning by Sampling Rules**
U of M Worked on a novel active learning paradigm which samples rules that cover
Lead batches of examples with an accuracy, and solicits people to refine rules; rules act as an indirection between examples and people

05/2018 – 05/2019 **Learning Linguistic Expressions with Deep Learning and Human-in-the-Loop**
IBM Research Worked on a novel human-in-the-loop interaction paradigm which learns first-
Lead order-logic rules with deep learning and recruits people to select rules that generalize beyond the training data

09/2017 – 04/2018 **Specifying Affordances of Objects**
U of M Worked on a crowdsourcing method to teach robots on how to interact with
Lead never-before-seen objects

05/2017 – 09/2017 **Bolt: Instantaneous Crowdsourcing Via Just-in-Time Training**
U of M Worked on a "look-ahead" approach which breaks the cognitive barrier of
Co-Lead humans by predicting possible future states and fetching actions to each state beforehand through crowdsourcing

01/2017 – 05/2017 **Preserving Privacy in Crowd-Powered Systems**
U of M Worked on a crowd-powered system which leverages people to filter sensitive
Assistant information of images by showing segments at increasing level of granularities

03/2016 – 05/2017 **Remixing Animations for More Effective Crowd-Powered Prototyping of Interactive Interfaces**
U of M
Assistant Developed a feature that allows users to visualize and modify the path of objects in an animation; tested and debugged the system to run user studies

09/2015 – 02/2017 **Codeon: On-Demand Software Development Assistance**
U of M Developed a chat window to enable communication between the user and the
Assistant helper; helped conduct user studies

Publications

P.07 **Y. Yang.**, E. Kandogan, Y. Li, W.S.Lasecki, P.Sen. HEIDL: Learning Linguistic Expressions with Deep Learning and Human-in-the-Loop. *In Proceedings of the Association for Computational Linguistics (ACL 2019). Florence, Italy.*
(**Best Poster** at Michigan AI Symposium, 1/55)

P.06 **Y. Yang.**, E. Kandogan, Y. Li, W.S.Lasecki, P.Sen. A study on Interaction in Human-in-the-Loop Machine Learning for Text Analytics. *Joint Proceedings of the ACM IUI 2019 Workshops co-located with the 24th ACM Conference on Intelligent User Interfaces (ACM IUI 2019), Los Angeles, USA,* March 20, 2019.

P.05 A. Lundgard, **Y. Yang**, M.L. Foster, W.S. Lasecki. Bolt: Instantaneous Crowdsourcing via Just-in-Time Training. *In Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2018). Monstral, Canada.*

P.04 S.W. Lee, Y. Zhang, I. Wong, **Y. Yang**, S. D. O'Keefe, W.S. Lasecki. SketchExpress: Remixing Animations for More Effective Crowd-Powered Prototyping Of Interactive Interfaces. *In Proceedings of the ACM Symposium on User Interface Software and Technology (UIST 2017). Quebec City, Canada.*

P.03 H. Kaur, M. Gordon, **Y. Yang**, J. Teevan, E. Kamar, J. Bigham, W.S. Lasecki. CrowdMask: Using Crowds to Preserve Privacy in Crowd-Powered Systems via Progressive Filtering. *In AAAI Conference on Human Computation Demos (HCOMP 2017), Quebec City, CAN.*

P.02 Y. Chen, S.W. Lee, Y. Xie, **Y. Yang**, W.S. Lasecki, S. Oney. Codeon: On Demand Software Development Assistance. *In Proceedings of the International ACM Conference on Human Factors in Computing Systems (CHI 2017), Denver, USA.*

P.01 S. W. Lee, **Y. Yang**, S. Yan, Y. Zhang, I. Wong, Z. Yan, M. McGruder, C. M. Homan, W. S. Lasecki. Creating Interactive Behaviors in Early Sketch by Recording and Remixing Crowd Demonstrations. *In AAAI Conference on Human Computation Demos (HCOMP 2016), Austin, TX.*