

Michael Xieyang Liu

PH.D STUDENT · HCI RESEARCHER

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Research Interests

Human-Computer Interaction (HCI), Programming Support Tools, Sensemaking, End-user Programming, Intelligent User Interfaces

Education

Ph.D. in Human-Computer Interaction *(in progress)*

Aug. 2017 - Present

CARNEGIE MELLON UNIVERSITY, HUMAN-COMPUTER INTERACTION INSTITUTE (HCII), SCHOOL OF COMPUTER SCIENCE (SCS)

Pittsburgh, PA, USA

• Advisor: Dr. Brad A. Myers & Dr. Aniket Kittur

B.S. in Computer Science

Sept. 2015 - Apr. 2017

UNIVERSITY OF MICHIGAN, DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Ann Arbor, MI, USA

• Advisor: Dr. Walter Lasecki

B.S.E. in Electrical and Computer Engineering

Sept. 2013 - Aug. 2017

UNIVERSITY OF MICHIGAN – SHANGHAI JIAO TONG UNIVERSITY JOINT INSTITUTE

Shanghai, China

• Advisor: Dr. Jing Liu

Publications

PEER-REVIEWED CONFERENCE PAPERS

- [C.2] Jean Y. Song, Stephan J. Lemmer, **Michael Xieyang Liu**, Shiyang Yan, Juho Kim, Jason J. Corso, Walter S. Lasecki. 2019. Popup: Reconstructing 3D Video Using Particle Filtering to Aggregate Crowd Responses. *ACM International Conference on Intelligent User Interfaces (IUI 2019)*.
- [C.1] Yu-Wei Chao, Yunfan Liu, **Xieyang Liu**, Huayi Zeng, Jia Deng. 2018. Learning to Detect Human-Object Interactions. *2018 IEEE Winter Conference on Applications of Computer Vision (WACV 2018)*.

WORKSHOP PAPERS

- [W.2] **Michael Xieyang Liu**, Nathan Hahn, Angelina Zhou, Shaun Burley, Emily Deng, Aniket Kittur, Brad A. Myers. 2018. UNAKITE: Support Developers for Capturing and Persisting Design Rationales When Solving Problems Using Web Resources. *DTSHPS'18 Workshop on Designing Technologies to Support Human Problem Solving, IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC 2018)*.
- [W.1] **Michael Xieyang Liu**, Shaun Burley, Emily Deng, Angelina Zhou, Aniket Kittur, Brad A. Myers. 2018. Supporting Knowledge Acceleration for Programming from a Sensemaking Perspective. *Sensemaking Workshop @ CHI Conference on Human Factors in Computing Systems (CHI 2018)*

POSTERS

- [P.1] Jane Hsieh, **Michael Xieyang Liu**, Brad A. Myers, Aniket Kittur. 2018. An Exploratory Study of Web Foraging to Understand and Support Programming Decisions. *IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC 2018)*.

Research Experience

Graduate Research Assistant (advised by Dr. Brad A. Myers & Dr. Aniket Kittur)

Aug. 2017 - Present

HUMAN-COMPUTER INTERACTION INSTITUTE, CARNEGIE MELLON UNIVERSITY

Pittsburgh, PA, USA

- Working on UNAKITE, a system that scaffolds developers in making decisions using information from various web sources and embedding their decision-making structures into their code.

Undergraduate Researcher (advised by Dr. Walter Lasecki)

CROWDS AND MACHINES LAB, UNIVERSITY OF MICHIGAN

- Worked on crowd & AI-powered interdisciplinary projects that address novel and promising research questions.

Mar. 2016 - May. 2017

Ann Arbor, MI, USA

Research Assistant (advised by Dr. Jia Deng)

VISION & LEARNING LAB, UNIVERSITY OF MICHIGAN

- Worked on a computer vision based toolkit that boosts performance on human-object interaction detection by exploiting human-object spatial relations.

Sept. 2015 - Apr. 2016

Ann Arbor, MI, USA

Teaching Experience

Instructional Aide – EECS484 Database Management Systems (twice)

UNIVERSITY OF MICHIGAN

Fall 2016, Winter 2017

Ann Arbor, MI, USA

Teaching Assistant – Vv255 Multivariate Calculus

UNIVERSITY OF MICHIGAN – SHANGHAI JIAO TONG UNIVERSITY JOINT INSTITUTE

Summer 2015

Shanghai, China

Students Mentored

Jane Hsieh

OBERLIN COLLEGE UNDERGRADUATE STUDENT

- Worked on studying programmers' web-foraging behaviors. Contributed to the development of the UNAKITE system.

Summer 2018, Fall 2018, Spring 2019

Emily Deng

CMU MASTER'S STUDENT

- Worked on designing and carrying out interview studies with programmers that probe their programming behaviors and needs.

Fall 2017

Shaun Burley

CMU MASTER'S STUDENT

- Worked on designing and carrying out interview studies with programmers that probe their programming behaviors and needs.

Fall 2017

Selected Honors, Grants & Awards

SHF: Small: Knowledge Acceleration for Programming (\$500,000 over three years), NSF

Jun. 2018

James B. Angell Scholar, 94th Annual Honors Convocation, University of Michigan

Mar. 2017

EECS Scholar Award, 2017 EECS Honors & Awards Reception, University of Michigan

Mar. 2017

2016 Summer Undergraduate Research Experience (SURE) program, University of Michigan

May. 2016

Tang-Junyuan Fellowship (Top 2/250, \$50,000), UM-SJTU Joint Institute

Jul. 2015, Jul. 2016

Dean's List, University of Michigan

Dec. 2015, Apr. 2016

Basic Teaching Assistant Certificate, Center for Learning and Teaching, UM-SJTU Joint Institute

Aug. 2015

Dean's List, UM-SJTU Joint Institute

Dec. 2013, Aug. 2014, Dec. 2014, Aug. 2015

Fellowship for Outstanding Academic Performance, Shanghai Jiao Tong University

Jun. 2015

Meritorious Winner (Acceptance: 9%), COMAP Mathematical Contest in Modeling

Apr. 2015

Academic Service

Paper Reviewing Conferences: ACM CHI (2019)

Languages & Technical Skills & Courses

Languages **English** - Native or bilingual proficiency, **Chinese (Mandarin)** - Native or bilingual proficiency,
German - Limited working proficiency

Programming HTML/Javascript/CSS, Python, SQL, C/C++, Swift, Java, LaTeX, etc.

Web & App Development React, Angular, Redux, Bootstrap, Node.JS, PHP, Ionic, etc.

Deep Learning & AI Pytorch, Tensorflow

Courses Machine Learning, Deep Learning, Database Management Systems, Information Security, Web Development