

# 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)*

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

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

Aug. 2017 - Present

Pittsburgh, PA, USA

### B.S. in Computer Science

UNIVERSITY OF MICHIGAN, DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

• Advisor: Dr. Walter Lasecki

Sept. 2015 - Apr. 2017

Ann Arbor, MI, USA

### B.S.E. in Electrical and Computer Engineering

UNIVERSITY OF MICHIGAN – SHANGHAI JIAO TONG UNIVERSITY JOINT INSTITUTE

• Advisor: Dr. Jing Liu

Sept. 2013 - Aug. 2017

Shanghai, China

## 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. Popul: 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)

HUMAN-COMPUTER INTERACTION INSTITUTE, CARNEGIE MELLON UNIVERSITY

- 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.

Aug. 2017 - Present

Pittsburgh, PA, USA

### **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