

Michael Xieyang Liu

PH.D STUDENT · HCI RESEARCHER

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Research Interests

Human-Computer Interaction, 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),

Pittsburgh, PA, USA

SCHOOL OF COMPUTER SCIENCE (SCS)

• 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

Ann Arbor, MI, USA

SCIENCE

• 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.3]  **Michael Xieyang Liu**, Jane Hsieh, Nathan Hahn, Angelina Zhou, Emily Deng, Shaun Burley, Cynthia Taylor, Aniket Kittur, Brad A. Myers. 2019. Unakite: Scaffolding Developers' Decision-Making Using the Web. *Proceedings of the 32nd Annual ACM Symposium on User Interface Software and Technology (UIST 2019)*. **Best Paper Honorable Mention Award.**
- [C.2] Jean Y. Song, Stephan J. Lemmer, **Michael Xieyang Liu**, Shiyan Yan, Juho Kim, Jason J. Corso, Walter S. Lasecki. 2019. Popup: Reconstructing 3D Video Using Particle Filtering to Aggregate Crowd Responses. *Proceedings of the 24th Annual 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)*.

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)*.

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)*

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.

Research Intern (advised by Dr. Lisa Yu, Dr. Wan-Yi Lin, and Dr. Alessandro Oltramari)

May. 2019 - Aug. 2019

RESEARCH AND TECHNOLOGY CENTER, BOSCH RESEARCH

Pittsburgh, PA, USA

- Worked on crowd & AI-powered projects that aim to improve the safety and performance of autonomous vehicles.

Undergraduate Researcher (advised by Dr. Walter Lasecki)

Mar. 2016 - May. 2017

CROWDS AND MACHINES LAB, UNIVERSITY OF MICHIGAN

Ann Arbor, MI, USA

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

Research Assistant (advised by Dr. Jia Deng)

Sept. 2015 - Apr. 2016

VISION & LEARNING LAB, UNIVERSITY OF MICHIGAN

Ann Arbor, MI, USA

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

Teaching Experience

Instructional Aide – EECS484 Database Management Systems (twice)

Fall 2016, Winter 2017

UNIVERSITY OF MICHIGAN

Ann Arbor, MI, USA

Teaching Assistant – Vv255 Multivariate Calculus

Summer 2015

UNIVERSITY OF MICHIGAN – SHANGHAI JIAO TONG UNIVERSITY JOINT INSTITUTE

Shanghai, China

Students Mentored

Jane Hsieh

Summer 2018 – Spring 2019

OBERLIN COLLEGE UNDERGRADUATE STUDENT

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

Emily Deng

Fall 2017

CMU MASTER'S STUDENT

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

Shaun Burley

Fall 2017

CMU MASTER'S STUDENT

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

Selected Honors, Grants & Awards

Best Paper Honorable Mention Award , 32nd Annual ACM Symposium on User Interface Software and Technology (UIST 2019)	Oct. 2019
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: CHI (2019), CSCW (2019), UIST (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