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), 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.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

Teaching Assistant – 05430/05630 Programming Usable Interfaces *Fall 2019*

Human-Computer Interaction Institute,Carnegie Mellon University *Pittsburgh, PA, USA*

Instructional Aide – EECS484 Database Management Systems *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