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**, Shiyan 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 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)   *Mar. 2016 - May. 2017*

CROWDS AND MACHINES LAB, UNIVERSITY OF MICHIGAN   *Ann Arbor, MI, USA*

- Worked on crowd-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 interation 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*

- Prepare and lead weekly discussion sessions and office hours that facilitate students' learning process. Prepare teaching materials and course projects. Grade assignments and exams.

Teaching Assistant – Vv255 Multivariate Calculus   *Summer 2015*

UNIVERSITY OF MICHIGAN – SHANGHAI JIAO TONG UNIVERSITY JOINT INSTITUTE   *Shanghai, China*

- Developed discussion slides and in-class exercises, led weekly discussion sessions, held office hours, graded.

Students Mentored

Jane Hsieh   *Summer 2018, Fall 2018*

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 prob their programming behaviors and needs.

Shaun Burley   *Fall 2017*

CMU MASTER'S STUDENT

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

Selected Honors, Grants & Awards

SHF: Small: Knowledge Acceleration for Programming (*$500,000 over 3 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*

Languages & Technical Skills

Languages	**English** (*Bilingual proficiency*), **Chinese** (*Native proficiency*), **German** (*Limited working proficiency*)
Programming	HTML, Javascript, CSS, Node.JS, Python, SQL, C/C++, Swift, Java, LaTeX, etc.
Web & App Development	React, Redux, Angular, Bootstrap, PHP, Ionic, etc.
Keywords	Machine Learning, Deep Learning, Programming User Interfaces

Standardized Test Results

TOEFL   **116/120** (Listening: 29/30, Reading 30/30, Speaking: 28/30, Writing: 29/30) *(taken in Sept. 2016)*