



Nathan Hahn

HCI Researcher & Engineer

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Summary

A multi-faceted software engineer and UX researcher with 8 years of experience conceptualizing, developing, and evaluating prototype cutting-edge software systems. Has worked with a variety of technologies, including AR/VR, modern web, mobile, and robotics, to develop systems and evaluate systems using mixed qualitative and quantitative techniques. Mentored undergraduate and graduate students to build and evaluate these systems, which have subsequently been published in top computer science conferences.

Looking to leverage his research, development and mentorship experience to build high quality, user-centric products with a fast-paced team of passionate individuals.

Education

Carnegie Mellon University

2020

Doctor of Philosophy, Human Computer Interaction

Advisor: Niki Kittur

Thesis: In Situ Sensemaking Support Systems

Carnegie Mellon University

2014

Bachelor of Science, Information Systems

Additional Major: Human Computer Interaction

Minor: Biomedical Engineering

Publications

Luther, K., Hahn, N., Dow, S., & Kittur, A. (2015). Crowdlines: Supporting synthesis of diverse information sources through crowdsourced outlines. In *Third AAAI Conference on Human Computation and Crowdsourcing*.

Hahn, N., Chang, J., Kim, J., & Kittur, A. (2016). The Knowledge Accelerator: Big picture thinking in small pieces. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 2258–2270).

Chang, J., Kittur, A., & Hahn, N. (2016). Alloy: Clustering with crowds and computation. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 3180–3191).

Chang, J., Hahn, N., & Kittur, A. (2016). Supporting mobile sensemaking through intentionally uncertain highlighting. In *Proceedings of the 29th Annual Symposium on User Interface Software and Technology* (pp. 61–68).

Hahn, N., Chang, J., & Kittur, A. (2018). Bento browser: complex mobile search without tabs. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (pp. 1–12).

Hahn, N., Iqbal, S., & Teevan, J. (2019). Casual microtasking: Embedding microtasks in Facebook. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (pp. 1–9).

Chang, J., Hahn, N., Perer, A., & Kittur, A. (2019). SearchLens: Composing and capturing complex user interests for exploratory search. In *Proceedings of the 24th International Conference on Intelligent User Interfaces* (pp. 498–509).

Liu, M., Hahn, N., Zhou, A., Burley, S., Deng, E., Kittur, A., & Myers, B. (2018). UNAKITE: Support Developers for Capturing and Persisting Design Rationales When Solving Problems Using Web Resources. In *Workshop on Designing Technologies to Support Human Problem Solving at the IEEE Symposium on Visual Languages and Human-Centric Computing*.

Liu, M., Hsieh, J., Hahn, N., Zhou, A., Deng, E., Burley, S., Taylor, C., Kittur, A., & Myers, B. (2019). Unakite: Scaffolding Developers' Decision-Making Using the Web. In *Proceedings of the 32nd Annual ACM Symposium on User Interface Software and Technology* (pp. 67–80).

Chang, J., Hahn, N., & Kittur, A. (2020). Mesh: Scaffolding Comparison Tables for Online Decision Making. In *Proceedings of the 33rd Annual ACM Symposium on User Interface Software and Technology* (pp. 391–405).

Chang, J., Hahn, N., Kim, Y., Coupland, J., Breneisen, B., Kim, H., Hwong, J., & Kittur, A. (2021). When the Tab Comes Due: Challenges in the Cost Structure of Browser Tab Usage. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (pp. 1–15).

Kuznetsov, A., Chang, J. C., Hahn, N., Rachatasumrit, N., Breneisen, B., Coupland, J., & Kittur, A. (2022). Fuse: In-Situ Sensemaking Support in the Browser. *Proceedings of the 35th Annual ACM Symposium on User Interface Software and Technology*.

Carraway, M., Chang, V., Hahn, N., & Campbell, S. (2023). Navigating Team Cognition: Goal Terrain as Living Map to Situation Awareness. In *AHFE International*.

Professional Experience

Army Research Labs – Washington, DC

February 2021 - present

Computer Scientist

Developed novel experiments and software to explore potential applications of AR/VR technology to modern Army problems. Managed two graduate students to assist with research efforts, collaborated with a team of contractors to develop code for deployed field experimentation, and managed collaborative efforts with academic institutions.

Microsoft Research - Redmond, WA

June 2016 - August 2016

Research Intern

Worked together with Shamsi Iqbal and Jaime Teevan to develop a novel microtasking interaction within Facebook. Created a chrome extension, ran a small field study, and published a paper (see above Microwriting Paper).

US Army - 311th Signal Command, Ft. Shafter HI

July 2011 - August 2013 (Summers)

Systems Developer

Developed and improved existing internal Army systems. Created tools to track Army assets and help desk support tickets. Responsible for planning, prototyping, documenting and coding of tools.

Carnegie Mellon Software Engineering Institute

January 2013 - May 2013

Research Assistant

Performed job task analysis on the cyber security field with an emphasis on malware analysts. This included interviews, a literature review, and an affinity diagram of the problem field.

The Boeing Company

June 2009 - July 2011 (Summers)

Software Developer Internship

Assisted with the creation and deployment of web-based configuration tools. Helped in the configuration and deployment of a customized C++ enclave guard, specialized for Department of Defense use.

eXmeritus Federal Systems Inc.

December 2008 - June 2009

Software Developer Internship

Assisted in the maintenance and improvement of custom security software tailored to customer specifications.