

Samuel J. Kaufman

kaufmans@cs.washington.edu • 209.761.6245 • <http://samk.name>

EDUCATION

Ph.D., Computer Science & Engineering *in progress*

Advisor: Rastislav Bodik

University of Washington, Seattle

M.S., Computer Science & Engineering

March 2020

University of Washington, Seattle

B.S. in Informatics *emphasis in Human-Computer Interaction*

September 2006 — June 2010

Honors Thesis: “Automatic programming with reuse-informed search”

Major G.P.A.: 3.83/4.00 • G.P.A.: 3.76/4.00

University of California, Irvine

HONORS & AWARDS

- Wissner-Slivka Endowed Fellowship, 2010.
- ARCS Fellowship, 2010.
- UW Computer Science & Engineering First-Year Fellowship, 2010–2011.
- Phi Beta Kappa, member since April 2009.
- Chancellor’s Award for Excellence in Undergraduate Research, 2008.
- Women in Information and Computer Sciences’ Gateway to Your Future Award, 2007.

PUBLICATIONS

- S. J. Kaufman, P. M. Phothilimthana, Y. Zhou and M. Burrows. “A learned performance model for the Tensor Processing Unit.” arXiv Preprint arXiv:2008.01040. 3 August 2020.
- S. J. Kaufman, P. M. Phothilimthana and M. Burrows. “Learned TPU cost model for XLA tensor programs.” ML for Systems workshop, NeurIPS 2019. Vancouver, BC, Canada.
- P. M. Phothilimthana, A. S. Elliot, A. Wang, A. Jangda, B. Hagedorn, H. Barthels, S. J. Kaufman, V. Grover, E. Torlak and R. Bodik. “Swizzle inventor: data movement synthesis for GPU kernels.” ASPLOS 2019. Providence, RI, USA.
- G. Fedyukovich, S. J. Kaufman and R. Bodik. “Sampling invariants from frequency distributions.” FMCAD 2017. Vienna, Austria. October 2017.
- S. J. Kaufman and M. S. Silberman. “Rebound effects in sustainable HCI.” CHI: 2011; Everyday Practice and Sustainable HCI Workshop. Vancouver, BC. May 2011.
- S. J. Kaufman and J. Chen. “Where we twitter.” CHI 2010; Microblogging Workshop. Atlanta, Georgia. April 2010.
- G. Marcu, S. J. Kaufman, J. K. Lee, R. W. Black, P. Dourish, G. R. Hayes and D. J. Richardson. “Design and evaluation of a computer science and engineering course for middle school girls.” SIGCSE 2010. Milwaukee, WI. March 2010.
- D. J. Patterson, X. Ding, S. J. Kaufman, K. Liu and A. Zaldivar. “An ecosystem for learning and using sensor-driven status messages.” *IEEE Pervasive Computing*, vol. 8, no. 4, pp. 42–49. October–December, 2009.

- D. J. Patterson, C. Baker, X. Ding, S. J. Kaufman, K. Liu and A. Zaldivar. "Online everywhere: evolving mobile instant messaging practices." UbiComp 2008. Seoul, South Korea. September 2008.
- G. R. Hayes, D. J. Patterson, M. Monibi and S. J. Kaufman. "Interactive and intelligent visual communication systems." Workshop short paper. In the *proceedings of the 7th international conference on interaction design and children*. Chicago, IL. June 2008.

P R E S E N T A T I O N S

- S. J. Kaufman. "Nomatic*IM." Talk. U.C. Irvine Undergraduate Research Symposium. Irvine, CA. May 2008.
- S. J. Kaufman, D. J. Patterson and G. R. Hayes. "Design of interactive visual scheduling systems." Abstract/poster. International Meeting for Autism Research. London, UK. May 2008.
- S. J. Kaufman. "Nomatic*IM for presence." Talk. U.C. Irvine Undergraduate Research Symposium. Irvine, CA. August 2007.
- N. Noack, S. J. Kaufman and D. J. Patterson. "Nomatic*IM: context-aware instant messaging." Poster. Pervasive 2007, the 5th International Conference on Pervasive Computing. Toronto, ON, CA. May 2007.

E X P E R I E N C E

Research Intern, Google Brain — Summer 2019 (ongoing)

Develop a machine learning-based cost model and other improvements to a new autotuner for XLA tensor programs targeting Google's Tensor Processing Unit.

Co-Founder Gradient — 2013–2017

Work with clients to design and build digital products, especially for mobile devices and data-heavy domains. Hire engineers, designers, and sales staff, both internally and for client teams. Develop sales, product, and content strategies.

Coursera, Instructor — 2016

Develop materials and lectures for the flagship Coursera iOS Objective-C programming course.

Co-Founder, Assetmap — 2011–2012

Develop product strategy and technical infrastructure for product prototyping, hire initial team, and execute user research. Build and deploy online recommender system for skills-based partnering among groups of non-profit organizations.

Developer, Quub — 2009–2010

Develop mobile application, production machine learning system ingesting device sensor data, and Session Initiation Protocol (SIP) infrastructure. Quub was a technology startup based in Irvine, CA.

Undergraduate Researcher — January 2007–March 2009

Prof. Donald J. Patterson, Department of Informatics, U.C. Irvine

Develop Nomatic*IM, including various machine learning algorithms. Nomatic*IM is a system for learning social context descriptions from mobile device sensors to support instant messenger presence negotiation, and for linking geographic positions to aggregate place descriptions.

Undergraduate Researcher — December 2007–April 2008

Prof. Gillian R. Hayes, Department of Informatics, U.C. Irvine

Develop intelligent visual schedule system for special education classrooms.