Sarah Lim

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Research Interests

Programming languages, rich type systems, human-computer interaction, computing education.

Education

Jun 2018 **Northwestern University**, B.A. Computer Science, *summa cum laude* (3.94/4.0)
Graduate-level coursework: Design, Technology, and Research, Code Analysis and Transformation, Type Systems, Probabilistic Graphical Models, Graduate Algorithms, Systems Programming in Rust

Research Experience

Jul 2018 – Oct 2018 **Microsoft Research**, Cambridge, UK — Advisor: Gavin Smyth
Research Intern, Future of Work
Designed and implemented algorithms for augmenting remote collaboration with machine vision. Designed and built prototype interfaces for content search.

Northwestern University, Evanston, IL
Apr 2015 – Jun 2018 *Undergraduate Researcher, Delta Lab* — Advisors: Haoqi Zhang, Nell O'Rourke
Designed, built, and evaluated novel inspection tools for Cascading Style Sheets, based on research in programming languages and the learning sciences.

Jan 2018 – Present *Undergraduate Researcher, Theory Group* — Advisor: Jason Hartline
Designed algorithms for estimating the skill of peer graders using low-rank matrix approximations, as part of an NSF REU. Project ongoing as of summer 2019.

Jan 2017 – Apr 2017 *Research Assistant, Center for Connected Learning* — Advisor: Jason Bertsche
Implemented linear algebra primitives and experimental Web Worker compilation for the NetLogo Web multi-agent modeling platform.

Sep 2013 – Jun 2014 **University of Washington**, Seattle, WA — Advisor: Alia Martin
Research Assistant, Early Childhood Cognition Lab
Ran and coded eye-tracking studies on prosocial behavioral development in infancy.

Industry Experience

Jun 2019 – Present **Notion**, San Francisco, CA
Software Engineer
Designing and building tools for end-user programming.

Oct 2018 – May 2019 **Khan Academy**, Mountain View, CA
Software Engineer, Early Product Development
Led client-side engineering for the site-wide learning time measurement system. Led preparation and submission of a paper on an experimental free-response system.

Previously *Software Engineering Intern* at **Khan Academy** (2017), **LinkedIn** (2016).
Design Intern at **Common Cause Illinois** (2015).

Awards and Honors

2020	UC Berkeley Chancellor's Fellowship
2018	UIST Best Paper Honorable Mention
	Outstanding Senior in Computer Science (top graduating CS major)
2017	First Place, CHI Student Research Competition
	Microsoft Tuition Scholarship
2016	Google Lime Scholarship
	Box Engineering Diversity Scholarship
	Palantir Women in Technology Scholarship
	Alumnae of Northwestern University STEM Scholarship
	Northwestern Undergraduate Research Grant
2015	Milton S. Florsheim Prize for Excellence in Debate
2014	National Merit Scholarship

Conference Travel Grants

2019	Oregon Programming Languages Summer School (OPLSS)
2018	ICFP Programming Languages Mentoring Workshop (PLMW)
2017	EECS Department Travel Grant
	Office of Undergraduate Research Travel Grant
	Weinberg College of Arts and Sciences Travel Grant
2016	SC16 Experiencing HPC for Undergraduates Program
	Google Grace Hopper Travel Grant

Publications

Sarah Lim, Joshua Hibschman, Haoqi Zhang, and Eleanor O'Rourke. 2018. Ply: A Visual Web Inspector for Learning from Professional Webpages. In *Proceedings of the 31st Annual ACM Symposium on User Interface Software and Technology (UIST '18)* **Best Paper Honorable Mention**, **implemented in Firefox 70 as Inactive CSS**

Sarah Lim. 2017. Visual Regression Pruning for Web Design Source Inspection. In *Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '17)* **First Place, Student Research Competition**

Working Papers

Andy Matuschak, Nick Barr, May-Li Khoe, Scott Farrar, Brian Johnsrud, and Sarah Lim. 2019. Designing a Structured Activity Platform to Scaffold Complex Skills. In review. (2019). Working paper.

Invited Talks

2019	*WebAssembly: All the memory safety of C combined with all the blazing speed of JavaScript.* React Rally, Salt Lake City, UT. August 2019.
2018	*Ply: A Visual Web Inspector for Learning from Professional Webpages.* UIST, Berlin, Germany. October 2018.
2017	*Big Ideas Forum: How We Learn About Learning.* Invited panelist. Northwestern University, Evanston, IL. May 2017.
	Visual Regression Pruning for Web Design Source Inspection. CHI Student Research Competition, Denver, CO. May 2017.
2016	*Guided CSS Inspection Using Tutorial Keyword Frequency.* Google Scholars' Retreat, Mountain View, CA. June 2016.

Teaching Assistant Experience

Spring 2018	EECS 397: Software Construction
Spring 2018	EECS 214: Data Structures
Winter 2018	EECS 111: Fundamentals of Computer Programming I (Head Teaching Assistant)
Fall 2017	EECS 474: Probabilistic Graphical Models
Fall 2017	EECS 111: Fundamentals of Computer Programming I (Head Teaching Assistant)
Spring 2017	EECS 214: Data Structures
Winter 2017	EECS 111: Fundamentals of Computer Programming I (Head Teaching Assistant)
Fall 2016	EECS 111: Fundamentals of Computer Programming I (Head Teaching Assistant)
Spring 2016	EECS 214: Data Structures
Winter 2016	EECS 111: Fundamentals of Computer Programming I
Fall 2015	EECS 111: Fundamentals of Computer Programming I

Service to the Profession

2020	Social Session Co-organizer, PL/HCI Swimmer School
2020	External Reviewer, UIST

University Service

Sep 2016 – Jun 2018	*Student Advisory Board*, Weinberg College of Arts and Sciences Invited advisor to the Dean on behalf of the Computer Science major.
Sep 2016 – Jun 2017	*Curricular Review Committee*, Weinberg College of Arts and Sciences One of two invited undergraduate members.