

AKSHITHA SRIRAMAN

Curriculum Vitae — Feb 2020

University of Michigan
Department of Computer Science & Engineering
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BRIEF BIOGRAPHY

I am a computer systems researcher. My research interests are in the areas of computer architecture and systems software, focusing on designing efficient hyperscale web systems.

My research improves the performance, cost, and energy efficiency of hyperscale web services. Current web service systems introduce trade-offs between performance and numerous features essential for cost- and energy-efficient operation of data centers (e.g., high server utilization, continuous power management, and use of commodity hardware and software). Specifically, I have designed and implemented practical and scalable systems that improve service performance across the system stack, without sacrificing cost- and energy-efficiency in modern hyperscale web systems.

I am a Facebook fellow, a UIUC Rising Stars in EECS Workshop participant, and a recipient of the Rackham Graduate Fellowship. My work has resulted in multiple research papers at top-tier computer architecture and systems venues such as OSDI, ISCA, and ASPLOS.

EDUCATION

Ph.D., Computer Science and Engineering University of Michigan <i>Advisor:</i> Prof. Thomas F. Wenisch <i>Dissertation title:</i> Enabling Hyperscale Web Services	2015 - Present
M.S., Embedded Systems University of Pennsylvania <i>Advisor:</i> Prof. Joseph Devietti	2013 - 2015
B.E., Electronics and Communication Visvesvaraya Technological University	2008 - 2012

AWARDS AND HONORS

<input type="checkbox"/> Facebook Fellowship (Distributed Systems) \$224,000 towards tuition, stipend, and travel	2020 - 2022
<input type="checkbox"/> ASPLOS Best Presentation Award Best presentation out of 86 presentations	2020
<input type="checkbox"/> Selected to attend the Heidelberg Laureate Forum	2020
<input type="checkbox"/> Selected for UIUC Rising Stars in EECS Workshop	2019
<input type="checkbox"/> Facebook Fellowship Finalist (Distributed Systems) Recognized as the first runner-up	2019
<input type="checkbox"/> WACI (ASPLOS) Chair's Choice Award	2019
<input type="checkbox"/> Cross-layer Computing Summer School Student Scholarship 20 winners nation-wide	2018
<input type="checkbox"/> Anita Borg Grace Hopper Student Scholarship \$1000 cash prize	2017

- ☐ **Rackham Merit Ph.D. Fellowship**
\$72,000 towards tuition, stipend, and travel

2015
- ☐ **CIS Full Tuition Scholarship (University of Pennsylvania)**
\$35,000 towards tuition, stipend, and travel

2014
- ☐ **“Power Player” award at Microsoft R&D (India)**
\$500 cash prize

2012
- ☐ **Award for academic excellence (Visvesvaraya Technological University)**
Ranked 5th (out of 10,000 students) in the state

2012

PEER-REVIEWED CONFERENCE PUBLICATIONS

Tanvir Ahmed Khan, **Akshitha Sriraman**, Joseph Devietti, Gilles Pokam, Heiner Litz, Baris Kasikci *I-SPY: Context-Driven Conditional Instruction Prefetching with Coalescing*. In proceedings of the 53rd IEEE/ACM International Symposium on Microarchitecture (**MICRO '20**). Oct 2020. Acceptance rate: $66/422 = 15.6\%$

Introduces a novel profile-driven instruction prefetching technique that conditionally prefetches instructions only when the program context is known to lead to misses

Akshitha Sriraman, Abhishek Dhanotia

Accelerometer: Understanding Acceleration Opportunities for Data Center Overheads at Hyperscale. In proceedings of the 25th International Conference on Architectural Support for Programming Languages and Operating Systems (**ASPLOS '20**). Mar 2020. Acceptance rate: $86/476 = 18.1\%$

Best Presentation Award

Received the “Artifact Available” and “Artifact Functional” ACM badges

Comprehensively identifies software and hardware acceleration opportunities in hyperscale microservices and analytically models realistic performance benefits from hardware acceleration

Akshitha Sriraman, Abhishek Dhanotia, Thomas F. Wenisch

SoftSKU: Optimizing Server Architectures for Microservice Diversity @Scale. In proceedings of the 46th International Symposium on Computer Architecture (**ISCA '19**). Jun 2019. Acceptance rate: $62/365 = 16.9\%$

First comprehensive architectural and system-level characterization of real-world On-Line Data Intensive (OLDI) microservices, which aided in building an automated tool that improves microservice performance- and cost-efficiency by customizing hardware and OS knobs for each microservice

Amirhossein Mirhosseini, **Akshitha Sriraman**, Thomas F. Wenisch

Enhancing Server Efficiency in the Face of Killer Microseconds. In proceedings of the 25th International Symposium on High-Performance Computer Architecture (**HPCA '19**). Feb 2019. Acceptance rate: $46/233 = 19.7\%$

A novel heterogeneous server architecture that employs aggressive multithreading to solve the infamous “killer microsecond” problem, without sacrificing the Quality-of-Service (QoS) of OLDI microservices

Akshitha Sriraman, Thomas F. Wenisch

μTune: Auto-Tuned Threading for OLDI Microservices. In proceedings of the 13th USENIX Symposium on Operating Systems Design and Implementation (**OSDI '18**). Oct 2018. Acceptance rate: $47/264 = 17.8\%$

Makes the important observation that the latency-optimal microservice threading model or concurrency design choice depends on the offered load, paving the way for an automatic run-time load adaptation system that tunes threading models & thread pool sizes to minimize microservice tail latency

Akshitha Sriraman, Thomas F. Wenisch

μSuite: A Benchmark Suite for Microservices. In proceedings of the International Symposium on Workload Characterization (**IISWC '18**). Sep - Oct 2018. Acceptance rate: $17/47 = 36.1\%$

Presents the first benchmark suite of end-to-end OLDI services composed of microservices and characterizes their OS and network overheads

Liang Luo, **Akshitha Sriraman**, Brooke Fugate, Shiliang Hu, Gilles Pokam, Chris J. Newburn, Joseph Devietti

LASER: Light, Accurate Sharing dEtection and Repair. In proceedings of the 22nd International Symposium on High Performance Computer Architecture (**HPCA '16**). Mar 2016. Acceptance rate: $53/240 = 22.0\%$

A novel low-overhead run-time tool that detects cache contention-induced performance bugs and mitigates them using dynamic binary re-writing

PEER-REVIEWED WORKSHOP PUBLICATIONS

Lillian Pentecost, Marco Donato, **Akshitha Sriraman**, Gu-Yeon Wei, David Brooks
Analytically Modeling NVM Design Trade-Offs. Non-Volatile Memories Workshop (**NVMW**). Mar 2020.

Introduces an analytical model to analyze the large space of available memory technologies

Radhika Ghoshal, Yu-Shun Hsiao, **Akshitha Sriraman**, David Brooks
Efficient Event Notification Paradigms for Hyperscale Microservices. Young Architect Workshop (**YArch**). Mar 2020.

Proposes hardware-assisted event notification using cache coherence signals

Akshitha Sriraman, Abhishek Dhanotia, Thomas F. Wenisch
Optimizing Server Architectures for Microservice Diversity @Scale. Career Workshop for Women and Minorities in Computer Architecture held in association with the International Symposium on Microarchitecture (**CWWMCA - MICRO**). Oct 2019.

Introduces a tool that automatically improves microservice performance- and cost-efficiency by customizing hardware and OS knobs in commodity servers

Akshitha Sriraman

Unfair Data Centers for Fun and Profit. In proceedings of the Wild And Crazy Ideas session held in association with the International Conference on Architectural Support for Programming Languages and Operating Systems (**WACI - ASPLOS**). Apr 2019.

Received the WACI Chair's Choice Award

Proposes investigating user traits and their correlation with acceptable wait times to design user-specific microservice Service Level Agreements

Akshitha Sriraman, Thomas F. Wenisch

Performance-Efficient Notification Paradigms for Disaggregated OLDI Microservices. In proceedings of the Workshop on Resource Disaggregation held in association with the International Conference on Architectural Support for Programming Languages and Operating Systems (**WORD - ASPLOS**). Apr 2019.

Investigates how widely-used notification paradigms impact microservice latency distributions

Amirhossein Mirhosseini, **Akshitha Sriraman**, Thomas F. Wenisch

Hiding the Microsecond-Scale Latency of Storage-Class Memories with Duplexity. Non-Volatile Memories Workshop (**NVMW**). Mar 2019.

First server architecture to improve server utilization in the presence of μ s-scale stalls, without sacrificing QoS and tail latency of microservices

Akshitha Sriraman, Thomas F. Wenisch

Auto-Tuned Threading for OLDI Microservices. Career Workshop for Women and Minorities in Computer Architecture held in association with the International Symposium on Microarchitecture (**CWWMCA - MICRO**). Oct 2018.

Discusses an automatic load adaptation system that tunes threading models to minimize microservice tail latency

Akshitha Sriraman, Thomas F. Wenisch

A Benchmark Suite for Microservices. Workshop on Architectures and Systems for Big Data held in association with the International Symposium on Computer Architecture (**ASBD - ISCA**). Jun 2018. *Suggests how μ Suite can be used by researchers to facilitate future research*

Akshitha Sriraman, Thomas F. Wenisch

Performance Characterization of a Taxonomy of Threading Models for Mid-tier Servers. Career Workshop for Women and Minorities in Computer Architecture held in association with the International Symposium on Microarchitecture (**CWWMCA - MICRO**). Oct 2017.

Makes the important observation that inherent latency trade-offs between threading models can be exploited at system run-time to minimize microservice tail latency

Akshitha Sriraman, Sihang Liu, Sinan Gunbay, Shan Su, Thomas F. Wenisch

Deconstructing the Tail at Scale Effect Across Network Protocols. Workshop on Duplicating, Deconstructing and Debunking, held in association with the International Conference on Computer Architecture (**WDDD - ISCA**). Jun 2016.

Establishes that widely-used network protocol software stacks can significantly degrade OLDI microservice tail latency

DISSERTATIONS

Akshitha Sriraman. “Enabling Hyperscale Web Services” Ph.D. dissertation. University of Michigan. (In Progress).

OPEN-SOURCE TOOLS AND INFRASTRUCTURE

Accelerometer: Analytical Model for Hardware Acceleration

Author: Akshitha Sriraman

An analytical model built using C++ for projecting speedup from hardware acceleration for microservice functionalities.

Code repository: <https://github.com/akshithasriraman/Accelerometer> & <https://doi.org/10.5281/zenodo.3612797>

μ Tune: A Framework that Auto-Tunes Threading for OLDI Microservices

Author: Akshitha Sriraman

A C++ tool that uses an event-based technique to detect offered load to seamlessly switch between threading models and scale thread pool sizes with minimal switching overhead; μ Tune abstracts complicated threading details from user-level application code. (OSDI 2018).

Code repository: <https://github.com/wenischlab/MicroTune>

μ Suite: A Benchmark Suite for OLDI Microservices

Author: Akshitha Sriraman

The first open-source benchmark suite of end-to-end OLDI services composed of microservices. (IISWC 2018).

Code repository: <https://github.com/wenischlab/MicroSuite>

PRESS

Analytical model predicts exactly how much a piece of hardware will speed up data centers, *TechXplore*.
Link Apr 2020

Analytical model predicts exactly how much a piece of hardware will speed up data centers, *The Michigan Engineer News Center*. Link Apr 2020

Researchers from Facebook has designed a way to measure exactly how much a hardware accelerator would speed up a datacenter, *Debug Lies News*. [Link](#) Apr 2020

PROFESSIONAL EXPERIENCE

Ph.D. Candidate, **University of Michigan**, Ann Arbor, MI Sep 2015 - Present
Advisor: Prof. Thomas F. Wenisch
Enabling Hyperscale Web Services

Visiting Research Fellow, **University of British Columbia**, Vancouver, Canada May 2020 - Present
Advisor: Prof. Margo Seltzer
Developing a generic hardware-software interface for diverse hardware accelerators

Visiting Research Fellow, **Harvard University**, Cambridge, MA Sep 2019 - Apr 2020
Advisor: Prof. David Brooks
Designing future hardware systems for data centers

Research Scientist, **Facebook Research**, Boston, MA Sep 2019 - Apr 2020
Supervisor: Vijay Balakrishnan
Designing custom hardware for diverse microservice functionalities

Research Intern, **Facebook Research**, Menlo Park, CA May - Aug 2019
Supervisor: Vijay Balakrishnan
Mentor: Abhishek Dhanotia
Analyzing production microservices' software stacks to understand acceleration opportunities and model speedup in hyperscale systems

Research Engineer, **Facebook Research**, Ann Arbor, MI Sep - Dec 2018
Supervisor: Murray Stokely
Mentor: Abhishek Dhanotia
Developed "soft" SKU—a strategy to maintain hardware fungibility despite significant diversity in bottlenecks across microservices

Research Intern, **Facebook Research**, Menlo Park, CA May - Aug 2018
Supervisor: Murray Stokely
Mentor: Abhishek Dhanotia
Comprehensively characterized system-level and architectural bottlenecks across Facebook's top production services

Research Intern, **Microsoft Research**, Redmond, WA May - Aug 2017
Supervisor: Dr. Galen Hunt
Mentor: Dr. Ed Nightingale
Developed a bare-metal hypervisor from scratch (including a virtualized MMU) to serve as a defense-in-depth security mechanism for Microsoft Azure Sphere; demonstrated two hypervisor-targeted security attacks and defenses

Research Intern, **Intel Labs**, Santa Clara, CA Jun - Aug 2015
Mentors: Dr. Gilles Pokam and Dr. Shiliang Hu
Low-overhead run-time tool to detect and mitigate performance degradation caused by the different kinds of cache misses

Research Assistant, **University of Pennsylvania**, Philadelphia, PA Dec 2013 - May 2015
Advisor: Prof. Joseph Devietti
Run-time detection and mitigation of performance bugs caused by false sharing

Performance Engineer, **Microsoft**, India Jul 2012 - Jun 2013
Manager: Tajdar Salam
Performance analysis of Windows server platforms

Research Intern, **Hindustan Aeronautics Limited**, India

Jan - Mar 2012

Manager: Mohan Rao

Real-time “rotation-per-minute”-based flight warning system for military helicopters/airplanes

TEACHING

University of Pennsylvania, Teaching Assistant with Prof. Joseph Devietti
Computer Architecture, Graduate Spring 2015

University of Pennsylvania, Teaching Assistant with Prof. Camillo J. Taylor
Computer Systems, Undergraduate Fall 2014

Invited guest lecture on warehouse-scale computing
CS 146/246 at Harvard University, Cambridge, MA Nov 2019

Invited guest lecture on cache coherence protocols
CIS 501 at the University of Pennsylvania, Philadelphia, PA Apr 2015

INVITED SEMINAR TALKS

Enabling Hyperscale Web Services

□ *Cornell University, Ithaca, NY* June 2020
Host: Prof. Adrian Sampson

□ *École polytechnique fédérale de Lausanne (EPFL), Switzerland* May 2020
Host: Prof. Babak Falsafi

□ *University of Wisconsin, Madison, WI* Mar 2020
Host: Prof. Remzi H. Arpaci-Dusseau

□ *Google, Madison, WI* Mar 2020
Host: Prof. Thomas F. Wenisch

□ *Yale University, New Haven, CT* Jan 2020
Host: Prof. Abhishek Bhattacharjee

□ *Harvard University, Boston, MA* Dec 2019
Host: Prof. David Brooks and Prof. Gu-Yeon Wei

□ *University of Pennsylvania, Philadelphia, PA* Dec 2019
Host: Prof. Joseph Devietti

□ *Google, Sunnyvale, CA* Jul 2019
Host: Dr. David Lo

□ *Brown University, Providence, RI* Apr 2019
Host: Prof. R. Iris Bahar

□ *University of Rhode Island, Kingston, RI* Apr 2019
Hosts: Prof. Resit Sendag & Prof. Augustus K. Uht

μ Suite & μ Tune: Auto-Tuned Threading for OLDI Microservices

□ *University of California Los Angeles, Los Angeles, CA* Mar 2019
Host: Prof. Tony Nowatzki

□ *Indian Institute of Science, Bangalore, India* Jan 2019
Host: Prof. Arkaprava Basu

□ *Microsoft Research, Bangalore, India* Jan 2019
Host: Dr. Muthian Sivathanu

□ <i>Intel Labs</i> , Bangalore, India Host: Dr. Shankar Balachandran	Jan 2019
□ <i>University of California San Diego</i> , San Diego, CA Host: Prof. Jishen Zhao	Oct 2018
□ <i>University of Southern California</i> , Los Angeles, CA Host: Prof. Xuehai Qian	Oct 2018
□ <i>University of Texas, Austin</i> , Austin, TX Hosts: Prof. Calvin Lin & Prof. Akanksha Jain	Sep 2018
Optimizing Server Architectures for Microservice Diversity @Scale <i>Facebook HQ</i> , Menlo Park, CA Hosts: Murray Stokely & Abhishek Dhanotia	Dec 2018

OTHER SELECTED TALKS AND PRESENTATIONS

Optimizing Server Architectures for Microservice Diversity @Scale <i>Career Workshop for Women & Minorities in Comp. Arch. (CWWMCA)</i> , Columbus, OH	Oct 2019
Understanding Acceleration Opportunities for Data Center Overheads @Scale <i>Facebook HQ</i> , Menlo Park, CA	Aug 2019
SoftSKU: Optimizing Server Architectures for Microservice Diversity @Scale <i>International Symposium on Computer Architecture (ISCA'19)</i> , Phoenix, AZ	Jun 2019
Unfair Data Centers for Fun and Profit <i>Workshop on Wild and Crazy Ideas (WACI)</i> , Providence, RI	Apr 2019
Performance-Efficient Notification Paradigms for Disaggregated OLDI Microservices <i>Workshop on Resource Disaggregation (WORD)</i> , Providence, RI	Apr 2019
μTune: Auto-Tuned Threading for OLDI Microservices <i>Symposium on Operating Systems Design and Implementation (OSDI)</i> , Carlsbad, CA	Oct 2018
μSuite: A Benchmark Suite for Microservices <i>International Symposium on Workload Characterization (IISWC)</i> , Raleigh, NC	Oct 2018
Auto-Tuned Threading for OLDI Microservices <i>Career Workshop for Women & Minorities in Computer Architecture (CWWMCA)</i> , Japan	Oct 2018
A Comprehensive Characterization of Facebook's Heavy Hitter Microservices <i>Facebook HQ</i> , Menlo Park, CA	Aug 2018
A Benchmark Suite of Microservices <i>Workshop on Architectures and Systems for Big Data (ASBD)</i> , Los Angeles, CA	June 2018
A Benchmark Suite of Microservices <i>Intel VEC retreat</i> , Ann Arbor, MI	June 2018
Characterization of a Taxonomy of Threading Models for Mid-tier Microservices <i>Engineering Graduate Symposium</i> , Ann Arbor, MI	Nov 2017
Characterization of a Taxonomy of Threading Models for Mid-tier Microservices <i>Career Workshop for Women & Minorities in Comp. Arch. (CWWMCA)</i> , Boston, MA	Oct 2017
Hypervisor-Based Defense-In-Depth for Microsoft Azure Sphere <i>Microsoft Research</i> , Redmond, WA	Aug 2017
A Case Study Characterizing Bottlenecks in High Dimensional Search <i>CRA-Women Grad Cohort Workshop</i> , Washington D.C.	Apr 2017

Data-Center-Scale System Support for Encyclopedic Recognition <i>Intel VEC retreat, Santa Clara, CA</i>	Dec 2016
Imagen: Custom Scaled-Out High Dimensional Search <i>ARM review, Ann Arbor, MI</i>	Nov 2016
Deconstructing the Tail at Scale Effect Across Network Protocols <i>Workshop on Duplicating, Deconstructing and Debunking (WDDD), Seoul, Korea</i>	Jun 2016
4C'sONS Haswell: 4C's - ONline cache profiling on Server platforms <i>Intel Labs, Santa Clara, CA</i>	Aug 2015
Crash Prevention System in a Helicopter <i>Hindustan Aeronautics Limited, Bangalore, India</i>	Jan 2012
Neuroprosthetics <i>National Conference on Design Innovations for 3Cs, Bangalore, India</i>	Feb 2012

PROFESSIONAL SERVICE

Program Committee Member

<input type="checkbox"/> ACM Symposium on Cloud Computing (SoCC)	2020
<input type="checkbox"/> Young Architect Workshop (YArch-ASPLOS)	2020

External Review Committee Member

<input type="checkbox"/> Architectural Support for Programming Languages and Operating Systems (ASPLOS)	2021
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Artifact Evaluation Committee

<input type="checkbox"/> Architectural Support for Programming Languages and Operating Systems (ASPLOS)	2019
<input type="checkbox"/> Symposium on Operating Systems Principles (SOSP)	2019

Conference Shadow Program Committee Member

<input type="checkbox"/> EuroSys	2019
<input type="checkbox"/> EuroSys	2018
<input type="checkbox"/> Architectural Support for Programming Languages and Operating Systems (ASPLOS)	2017

Conference Reviewer

<input type="checkbox"/> ACM SIGMETRICS	2019
<input type="checkbox"/> International Symposium on Microarchitecture (MICRO)	2016

Journal Reviewer

<input type="checkbox"/> ACM Transactions on Architecture and Code Optimization (TACO)	2018
<input type="checkbox"/> ACM Transactions on Architecture and Code Optimization (TACO)	2019
<input type="checkbox"/> ACM Transactions on Architecture and Code Optimization (TACO)	2020

Workshop Co-organizer

<input type="checkbox"/> Accelerating Your Job Search at MICRO	2020
<input type="checkbox"/> Young Architect Workshop (YArch) at ASPLOS	2020
<input type="checkbox"/> Career Workshop for Women & Minorities in Computer Architecture at MICRO	2019

Web Chair

- | | |
|---|------|
| <input type="checkbox"/> International Symposium on Low Power Electronics and Design (ISLPED) | 2020 |
| <input type="checkbox"/> International Symposium on Low Power Electronics and Design (ISLPED) | 2019 |
| <input type="checkbox"/> International Symposium on Low Power Electronics and Design (ISLPED) | 2018 |

Social Media Chair

- | | |
|---|------|
| <input type="checkbox"/> Architectural Support for Programming Languages and Operating Systems (ASPLOS) | 2020 |
| <input type="checkbox"/> Young Architect Workshop (YArch-ASPLOS) | 2020 |
| <input type="checkbox"/> International Symposium on Microarchitecture (MICRO) | 2019 |

Ph.D. Admissions Committee

- | | |
|--|------|
| <input type="checkbox"/> University of Michigan, Computer Science Department | 2019 |
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Student Organizer

- | | |
|---|------|
| <input type="checkbox"/> IEEE Micro Top Picks | 2018 |
| <input type="checkbox"/> University of Michigan Ph.D. prospective student visit day | 2018 |
| <input type="checkbox"/> Explore Grad Studies in CSE Workshop, University of Michigan | 2016 |

GRADUATE ADVISING

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|---|-------------|
| Tanvir Ahmed Khan (2nd yr. Ph.D. at U. Michigan) | 2020 |
| <i>Using application profiles to conditionally prefetch instructions for data center applications</i> | |
| Radhika Ghoshal (1st yr. Ph.D. at Harvard) | 2019 - 2020 |
| <i>Efficient Event Notification Paradigms for Hyperscale Microservices (YArch 2020)</i> | |
| Yu-Shun Hsiao (1st yr. Ph.D. at Harvard) | 2019 - 2020 |
| <i>Efficient Event Notification Paradigms for Hyperscale Microservices (YArch 2020)</i> | |
| Lillian Pentecost (4th yr. Ph.D. at Harvard) | 2019 - 2020 |
| <i>Analytically Modeling NVM Design Trade-Offs (NVMW 2020)</i> | |
| Mark Wilkening (4th yr. Ph.D. at Harvard) | 2019 - 2020 |
| <i>Using Service Clustering to Inform Server Selection and Service Management in Data Centers</i> | |

OUTREACH ACTIVITIES

Female Mentoring, University of Michigan, Ann Arbor, MI

- | | |
|---|--------------------|
| <input type="checkbox"/> Vidushi Goyal, Ph.D. student | Aug 2016 - Present |
| <input type="checkbox"/> Harini Muthukrishnan, Ph.D. student | Aug 2016 - Present |
| <input type="checkbox"/> Hiwot Tadesse Kassa, Ph.D. student | Aug 2017 - Present |
| <input type="checkbox"/> Reethika Ramesh, Ph.D. student | Aug 2018 - Present |
| <input type="checkbox"/> Katie Lim, Ph.D. student (U. Washington) | Aug 2019 - Present |
| <input type="checkbox"/> Sara Mahdizadeh Shahri, Ph.D. student (Penn State) | Aug 2019 - Present |
| <input type="checkbox"/> Katia Flores, Undergraduate (Sophomore) | Aug 2018 - 2019 |
| <input type="checkbox"/> Linh Le, Undergraduate (Junior) | Aug 2018 - 2019 |

Women In Computer Architecture (WICARCH) Mentoring Series Co-organizer
Organizing a mentorship program for female students in computer architecture Apr 2018 - Present

WICARCH Webinar Series Lead Organizer
Organizing webinars for women studying/working in computer architecture Dec 2018 - Present

Middle School Outreach Co-organizer, Ann Arbor, MI Dec 2017 - Apr 2019
Created the middle school outreach program to get middle school female students interested in CS; designed curriculum, trained and hired instructors, secured funding, etc

Middle School Teacher, Scarlett Middle School, Ann Arbor, MI Dec 2018 - Apr 2019
Taught computer science basics to middle school female students to get them excited about CS early on

Ensemble of CSE Ladies Chair, University of Michigan, Ann Arbor, MI Aug 2018 - Feb 2019
Co-ordinated activities for a female graduate student support group

CS Kickstart Hackathon Co-organizer, University of Michigan, Ann Arbor, MI Sep 2016
Workshop and hackathon aimed at improving gender diversity in computer science through increased female enrollments

Girls Encoded Co-organizer (along with Prof. Reetuparna Das), Ann Arbor, MI Mar 2016
Workshop aimed at getting high school female students interested in computer science