Vaspol Ruamviboonsuk

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EDUCATION

Ph.D. in Computer Science and Engineering — Expected 8, 2020
University of Michigan, Ann Arbor, MI
Advisor: Prof. Harsha V. Madhyastha
Thesis: TBD

M.S. in Computer Science and Engineering — 2016
University of Michigan, Ann Arbor, MI
Advisor: Prof. Harsha V. Madhyastha

B.S. with Distinction in Computer Science — 2014
University of Washington, Seattle, WA
Advisor: Prof. Richard Ladner
Thesis: DigiTaps: Eyes-free Number Entry Method with Minimal Voice Feedback

PUBLICATIONS

Vroom: Accelerating the Mobile Web with Server-Aided Dependency Resolution
Vaspol Ruamviboonsuk, Ravi Netravali, Muhammed Uluyol, and Harsha V. Madhyastha
ACM SIGCOMM 2017, Los Angeles, CA, August 2017 **(ANRP Award)**

Demonstration of the Myria big data management service
Daniel Halperin, Victor Teixeira de Almeida, Lee Lee Choo, Shumo Chu, Paraschos Koutris, Dominik Moritz, Jennifer Ortiz, Vaspol Ruamviboonsuk, Jingjing Wang, Andrew Whitaker, Shengliang Xu, Magdalena Balazinska, Bill Howe, and Dan Suciu
2014 ACM SIGMOD international conference on Management of data, Snowbird, UT, November 2014

Tapulator: A non-visual calculator using natural prefix-free codes
Vaspol Ruamviboonsuk, Shiri Azenkot, and Richard E Ladner
Poster session, the 14th international ACM SIGACCESS conference on Computers and accessibility (ASSETS 2012), Boulder, CO, October 2012

WORK EXPERIENCE

Software Engineer Intern — 10/2018 - 3/2019
Google Inc. Ann Arbor, MI
Team: Chrome Data Saver
Project: Wrap up the projects done with the team over Summer of 2017 and 2018 by submitting a paper to the NSDI 2020 conference.

Software Engineer Intern — 6/2018 - 8/2018
Google Inc. Seattle, WA
Team: Chrome Data Saver
Project: Optimized Chrome Lite Page render performance by identifying that fetches of CSS slows down rendering. Sped up the rendering of web pages by 50% by inlining CSS to the HTML, which eliminates the penalty of fetching CSS resources over the network.

Software Engineer Intern — 9/2017 - 12/2017
Google Inc. Mountain View, CA
Team: Ads Quality
Project: Worked on understanding the implications of different web page resource prefetching strategies.

Software Engineer Intern — 5/2017 - 8/2017
Google Inc. Seattle, WA
Team: Chrome Data Saver

Project: Prototyped of a server-side rendering system to improve the user experience when browsing the web on slow cellular networks using resource-constrained devices; press release: `https://blog.chromium.org/2019/03/chrome-lite-pages-for-faster-leaner.html`.

Graduate Student Research Assistant 5/2015 - Present
Advisor: Prof. Harsha V. Madhyastha.
Electrical Engineering and Computer Science Department, University of Michigan, Ann Arbor, MI

Software Developer Engineer in Test Intern 6/2013 - 9/2013
Microsoft. Redmond, WA
Project: Extended Windows Intune test framework to support fuzz testing, developed test modules using the extended features, and incorporated the module as part of the weekly test suite.

RESEARCH EXPERIENCE

Improving mobile web performance with aid from web servers
Advisor: Prof. Harsha V. Madhyastha *10/2015 - Present*

- Mobile page loads are slow because of underutilization of network and computational resources; a client can fetch the resources on a page only after it discovers them by parsing and executing other resources on the page.
- Designed and implemented the Vroom framework, which decouples discovery of resources from parsing and execution by leveraging recent web optimization techniques such as HTTP/2 PUSH and Link preload headers. Vroom is able to improve the median page load time by 5 seconds. [SIGCOMM'17]

Improving latency from clients to cloud services
Advisor: Prof. Harsha V. Madhyastha *05/2015 - 10/2015*

- Analyzed internet measurement data to identify degradations of latency between clients and web service front-ends.
- Designed and implemented an algorithm for dynamically varying which front-end a client is redirected to in order to minimize the user-perceived latencies.

Numerical input gestures for visually-impaired people
Advisor: Prof. Richard Ladner *2011 - 2014*

- Designed special gestures for inputting numbers on smartphones by leveraging multi-touch input surface for blind smartphone users. [ASSETS'12]

Myria, Big Data as a Service
Advisor: Prof. Magdalena Balazinska *2012 - 2014*

- Implemented a database operator in the system. [SIGMOD'14]

AWARDS

Internet Research Task Force, **Applied Networking Research Prize**, 2018
University of Michigan, **First-year Ph.D. Student Fellowship**, 2014
University of Washington, **Mary Gates Research Scholarship**, 2013

TEACHING EXPERIENCE

Graduate Student Instructor 1/2017 - 4/2017
Department of Computer Science and Engineering, University of Michigan, Ann Arbor, MI

- EECS 498: Introduction to Distributed Systems (Winter 2017)

Teaching Assistant 9/2012 - 3/2014
Department of Computer Science and Engineering, University of Washington, Seattle, WA

- CSE 344: Introduction to Data Management (Fall 2012, Winter 2013, Winter 2014)

SKILLS

Most of my work is done in C/C++, Go, Java, and Python. I also have some experience working with networking tools such as iptables and tcpdump. I am also familiar with interacting with Android smartphones via ADB.