
Tyler R. Caraza-Harter

tharter@wisc.edu, tylerharter@gmail.com
<https://tyler.caraza-harter.com/>

Education

University of Wisconsin-Madison - PhD in Computer Science (2016)

Advisors: Professor Andrea C. Arpaci-Dusseau and Professor Remzi H. Arpaci-Dusseau

University of Wisconsin-Madison - Masters in Computer Science (2012)

University of Wisconsin-Madison - Bachelors in Computer Science and Math (2010)

Work History

- **University of Wisconsin-Madison** - Teaching Faculty 1 (2018 to present)
- **Bauplan** - Consultant (2023-2024)
- **Microsoft** - Scientist at Gray Systems Lab (2016 to 2018)
- **University of Wisconsin-Madison** - Instructor for CS 537, Intro to OS (Spring 2016)
- **Tintri** - Summer Intern (2015)
- **University of Wisconsin-Madison** - Instructor for CS 537, Intro to OS (Fall 2014)
- **Meta (formerly Facebook)**: Summer Intern (2012, 2013)
- **Google**: Summer Intern (2011)
- **Qualcomm**: Summer Intern (2010)
- **Dairyland Power**: Summer Intern (2006, 2007, 2008)

Teaching History (>4500 students)

- **2025 Spring**: CS 544 Intro to Big Data Systems (392 students)
- **2024 Fall**: CS 544 Intro to Big Data Systems (411 students)
- **2024 Spring**: CS 368 C++ Programming (91 students) - family leave
- **2023 Fall**: CS 544 Intro to Big Data Systems (360 students); Directed Study (4 students)
- **2023 Spring**: CS 544 Intro to Big Data Systems (180 students); Directed Study (2 students)
- **2022 Fall**: CS 320 Data Sci Programming II (413 students)
- **2022 Spring**: CS 320 Data Sci Programming II (395 students); Directed Study (7 students)
- **2021 Fall**: CS 320 Data Sci Programming II (322 students); Directed Study (3 students)

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- **2021 Spring:** CS 320 Data Programming II (268 students); Directed Study (5 students)
 - **2020 Fall:** CS 320 Data Programming II (127 students); CS 638 DS in WI (18 students)
 - **2020 Spring:** CS 320 Data Programming II (116 students)
 - **2019 Fall:** CS 301 Intro Data Programming (598 students); CS 638 DS in Madison (17 students)
 - **2019 Spring:** CS 301 Intro Data Programming (375 students); Directed Study (10 students)
 - **2018 Fall:** CS 301 Intro Data Programming (316 students)
 - **2016 Spring:** CS 537 Intro to Operating Systems (48 students), Epic Campus
 - **2014 Fall:** CS 537 Intro to Operating Systems (75 students)

Professional Activities

- Morgridge Hall Space Committee (Fall 2024 to present)
- Open-source intern mentor via OSPO, Open-Source Program Office (Spring 2025)
- dotData (UW-Madison Data Science Club) faculty advisor (Spring 2021 to present)
- PC for 10th Workshop on Serverless Computing (December 2024)
- Data Science Program Committee (DSPC) member (Fall 2021 to Fall 2023)
- DS Bazaar Research Bazaar: led *Data Science for Cities* interactive discussion (February 2021)
- PC for 7th Workshop on Serverless Computing (December 2021)
- DS Bazaar Research Bazaar: led *Data Science in the City of Madison* session (January 2020)
- PC for 5th Workshop on Serverless Computing (December 2019)
- PC for 4th Workshop on Serverless Computing (December 2018)
- PC for 3rd Workshop on Serverless Computing (July 2018)
- PC for 2st Workshop on Serverless Computing (December 2017)
- PC for 1st Workshop on Serverless Computing (June 2017)

Awards and Recognition

- OSPO Open Source Award (2025)
- Carolyn Rosner Educator Award (2023)
- UW-Madison CS Departmental Golden Brick Recognition (2021, 2022, 2023)
- Course highlighted in Capital Times article: *"Data Science in Madison" class offers UW students "real world" projects* (2021)
- University Housing Honored Instructor (2014, 2019)
- SOSP Best Paper: *A File is Not a File...* (2011)

- NSF Fellowship (2012)
- Facebook Fellowship (2012)
- Guri Sohi Fellowship (2010)
- U.S. Patent 10,430,378: *Fast container distribution with storage acceleration* (2016)
- U.S. Patent 7,613,619: *Method for identifying allergens...* (2004)

Publications

Tingjia Cao, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau, and Tyler Caraza-Harter. Making Serverless Pay-For-Use a Reality with Leopard.	NSDI 2025
Yuanzhuo Yang, Kwangjong Choi, Keting Chen, Tyler Caraza-Harter. Forklift: Fitting Zygote Trees for Faster Package Initialization.	WOSC 2024
Jacopo Tagliabue, Tyler Caraza-Harter, Ciro Greco. Bauplan: Zero-copy, Scale-up FaaS for Data Pipelines	WOSC 2024
Anjali, Tyler Caraza-Harter, Michael Swift. Blending Containers and Virtual Machines: A Study of Firecracker and gVisor.	VEE 2020
Ethan G Young, Pengfei Zhu, Tyler Caraza-Harter, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. The True Cost of Containing: A gVisor Case Study.	HotCloud 2019
Edward Oakes, Leon Yang, Dennis Zhou, and Kevin Houck, Tyler Harter, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. SOCK: Rapid Task Provisioning with Serverless-Optimized Containers.	ATC 2018
Edward Oakes, Leon Yang, Kevin Houck, Tyler Harter, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. Fast and Flexible Containerization with Pipsqueak.	WOSC 2017
Scott Hendrickson, Stephen Sturdevant, Edward Oakes, Tyler Harter, Venkateshwaran Venkataramani, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. Serverless Computation with OpenLambda.	;login (Winter 2016)
Scott Hendrickson, Stephen Sturdevant, Tyler Harter, Venkateshwaran Venkataramani, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. Serverless Computation with OpenLambda.	HotCloud 2016
Tyler Harter, Brandon Salmon, Rose Liu, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. Slacker: Fast Distribution with Lazy Docker Containers.	FAST 2016

Suli Yang, Tyler Harter, Nishant Agrawal, Salini Selvaraj Kowsalya, Anand Krishnamurthy, Samer Al-Kiswany, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. Split-Level I/O Scheduling.	SOSP 2015
Tyler Harter, Dhruba Borthakur, Siying Dong, Amitanand Aiyer, Liyin Tang, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. Analysis of HDFS Under HBase: A Facebook Messages Case Study.	;login (June 2014).
Tyler Harter, Dhruba Borthakur, Siying Dong, Amitanand Aiyer, Liyin Tang, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. Analysis of HDFS Under HBase: A Facebook Messages Case Study.	FAST 2014
Zev Weiss, Tyler Harter, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. ROOT: Replaying Multithreaded Traces with Resource-Oriented Ordering.	SOSP 2013
Thanh Do, Tyler Harter, Yingchao Liu, Haryadi S. Gunawi, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. HARDFS: Hardening HDFS with Selective and Lightweight Versioning.	FAST 2013
Tyler Harter, Chris Dragga, Michael Vaughn, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. A File is Not a File: Understanding the I/O Behavior of Apple Desktop Applications.	TOCS 2012
Tyler Harter, Chris Dragga, Michael Vaughn, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. A File is Not a File: Understanding the I/O Behavior of Apple Desktop Applications.	SOSP 2011