

ARJUN DEVRAJ

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🌐 arjundevraj.github.io

EDUCATION

Cornell University

2023 – Present

Ph.D. Candidate in Computer Science

Ithaca, NY

- Advisor: Rachee Singh

Princeton University

2017 – 2021

A.B. in Computer Science, summa cum laude

Princeton, NJ

- GPA: 3.93/4.0
- Advisor: Jennifer Rexford
- Minor: Statistics and Machine Learning

HONORS AND AWARDS

Corning Outstanding Student Paper Award, OFC Conference	2026
National Science Foundation (NSF) Graduate Research Fellowship	2023
Sigma Xi Book Award for Outstanding Undergraduate Research, Princeton University	2021
Phi Beta Kappa, Princeton University	2021

PUBLICATIONS

- [1] Arjun Devraj, Umesh Krishnaswamy, Ying Zhang, Karuna Grewal, Justin Hsu, Eva Tardos, and Rachee Singh. Autonomy Without Anarchy in Decentralized WAN Traffic Engineering. *USENIX Symposium on Networked Systems Design and Implementation (NSDI)*, 2027.
- [2] Abhishek Vijaya Kumar, Arjun Devraj, and Rachee Singh. Mo Collectives, Mo Problems. *USENIX Symposium on Networked Systems Design and Implementation (NSDI)*, 2027.
- [3] Vaibhav Mehta, Arjun Devraj, Bill Owens, Justin Hsu, and Rachee Singh. $\lambda\lambda$: A Programming Language for Silicon Photonics. *ACM Special Interest Group on Data Communication (SIGCOMM)*, 2026.
- [4] Arjun Devraj, Bill Owens, Daniel Pérez-López, and Rachee Singh. In-Network Analog AllReduce for ML with Programmable Integrated Photonics. *Optical Fiber Communications Conference (OFC)*, 2026.
CORNING OUTSTANDING STUDENT PAPER AWARD
- [5] Abhishek Vijaya Kumar, Eric Ding, Arjun Devraj, Darius Bunandar, and Rachee Singh. Reconfigurable Torus Fabrics for Multi-tenant ML. *ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, 2026.
- [6] Arjun Devraj, Bill Owens, Umesh Krishnaswamy, Ying Zhang, and Rachee Singh. HEDGE: Traffic Engineering with Probabilistic Link Capacities. *USENIX Symposium on Networked Systems Design and Implementation (NSDI)*, 2026.
- [7] Arjun Devraj, Bill Owens, and Rachee Singh. The Reality of Chasing Shannon’s Limit in Optical Wide-Area Networks. *ACM Internet Measurement Conference (IMC)*, 2025.
- [8] Abhishek Vijaya Kumar, Arjun Devraj, Darius Bunandar, and Rachee Singh. Chip-to-chip photonic connectivity in multi-accelerator servers for ML. *Optical Fiber Communications Conference (OFC)*, 2025.
- [9] Abhishek Vijaya Kumar, Arjun Devraj, Darius Bunandar, and Rachee Singh. A case for server-scale

photonic connectivity. *ACM Workshop on Hot Topics in Networks (HotNets)*, 2024.

- [10] Arjun Devraj, Thomas L. Griffiths, and Qiong Zhang. Reconciling categorization and memory via environmental statistics. *Psychonomic Bulletin & Review*, 2024.
- [11] Arjun Devraj, Liang Wang, and Jennifer Rexford. REDACT: Refraction Networking from the Data Center. *ACM SIGCOMM Computer Communication Review (CCR)*, 2021.
- [12] Arjun Devraj, Qiong Zhang, and Thomas L. Griffiths. The Dynamics of Exemplar and Prototype Representations Depend on Environmental Statistics. *Annual Meeting of the Cognitive Science Society (CogSci)*, 2021.
- [13] Arjun Devraj, Eric Ding, Abhishek Vijaya Kumar, Robert Kleinberg, and Rachee Singh. Efficient AllReduce with Stragglers. *In submission*. [arXiv:2505.23523](https://arxiv.org/abs/2505.23523)

TALKS AND PRESENTATIONS

Google Networking Research Summit, <i>Sunnyvale, CA</i>	October 2025
Meta Workshop on WAN Control, <i>Menlo Park, CA</i>	October 2025
ACE Center for Evolvable Computing, <i>Virtual</i>	August 2025
Workshop on Reconfigurable Networks, <i>Ithaca, NY</i>	June 2025
Cornell Systems Research Seminar, <i>Ithaca, NY</i>	March 2024

TEACHING EXPERIENCE

TA for CS 4450/5456: <i>Introduction to Computer Networks</i> , Cornell University	Spring 2026
Lab TA for COS 126, 226, and 217, Princeton University	Fall 2019, Spring 2020
TA for COS 226: <i>Data Structures and Algorithms</i> , Princeton University	Fall 2018

INDUSTRY EXPERIENCE

Microsoft	June 2026 – August 2026
<i>Intern, Mentor: Umesh Krishnaswamy</i>	<i>Mountain View, CA</i>
Meta	August 2021 – July 2023
<i>Software Engineer, Ads Responsibility & Privacy</i>	<i>Menlo Park, CA</i>
Meta	June 2020 – August 2020
<i>Software Engineer Intern, WhatsApp Android</i>	<i>Menlo Park, CA</i>