

# AYUSH MISHRA

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- CONTACT INFORMATION** email: ayush [at] comp.nus.edu.sg  
Phone: +65 81545457  
website: comp.nus.edu.sg/~ayush
- RESEARCH INTERESTS** Systems and Networking → Internet Congestion Control, TCP, QUIC.
- EDUCATION**
- National University of Singapore**, Singapore  
*PhD Candidate*, Computer Science  
Advisor: Dr. Ben Leong  
Jan 2019 - Present (expected graduation May 2024)
- National Institute of Technology, Trichy**, Tamil Nadu, India  
*Bachelor of Technology, Computer Science and Engineering*  
May 2018 CGPA: 8.70/10.00
- Global Indian International School**, Singapore  
*Higher Secondary School Certificate Examination, CBSE*  
May 2014 Aggregate 95.6%
- SELECTED PUBLICATIONS**
- Keeping an Eye on Congestion Control in the Wild with *Nebby***  
Under submission  
Ayush Mishra, Lakshay Rastogi, Raj Joshi, and Ben Leong.
- Containing the Cambrian Explosion in QUIC Congestion Control**  
Proceedings of IMC 2023  
Ayush Mishra and Ben Leong.
- Masking Corruption Packet Losses in Datacenter Networks with Link-local Retransmission**  
Proceedings of SIGCOMM 2023  
Raj Joshi, Chaw Hwan Song, Xin Zhe Khooi, Nishant Budhdev, Ayush Mishra, Mun Choon Chan, and Ben Leong.
- Are we heading towards a BBR-dominated Internet?**  
Proceedings of IMC 2022  
Ayush Mishra, Tiu Wee Han, and Ben Leong.
- Understanding Speciation in QUIC Congestion Control**  
Proceedings of IMC 2022  
Ayush Mishra, Sherman Lim, and Ben Leong.
- LinkGuardian: Mitigating the impact of packet corruption loss with link-local retransmission**  
Proceedings of APNet 2022  
Raj Joshi, Qi Guo, Nishant Budhdev, Ayush Mishra, Mun Choon Chan, Ben Leong
- Conjecture: Existence of Nash Equilibria in Modern Internet Congestion Control**  
Proceedings of APNet 2021  
Ayush Mishra, Jingzhi Zhang, Melodies Sim, Sean Ng, Raj Joshi, and Ben Leong.
- The Great Internet TCP Congestion Control Census.**  
Proceedings of SIGMETRICS 2020  
Ayush Mishra, Xiangpeng Sun, Atishya Jain, Sameer Pande, Raj Joshi, and Ben Leong.

**AWARDS**

**Research Achievement Award** January 2024, January 2023, January 2020  
School of Computing, National University of Singapore

**Award for Excellence in Teaching** January 2021, January 2022  
School of Computing, National University of Singapore

**INSPIRE Scholarship for Higher Education** July 2014  
Department of Science and Technology (DST)  
Ministry of Science and Technology, Government of India

**APJ Abdul Kalam Award for Academic Proficiency** June 2012  
Global Indian International School, Singapore

**SERVICE**

**Contributed reviews:** SIGCOMM (2024), NSDI (2024), INFOCOM (2024), IMC (2023), ICNP (2023, 2022, 2021), APNet (2021), ACM HotNets (2020)

**TECHNICAL SKILLS**

**Programming:** Over 5000 lines: C, C++, Python, Bash  
**Familiar:** Java, Go, Rust

**Mobile and Web Technologies:** Android, Django, HTML, CSS, JavaScript

**Networking:** P4-16, OpenFlow, Mininet, Docker

**PROFESSIONAL EXPERIENCE**

**HP Enterprises, Singapore**  
Software Development Intern  
May, 2016 - June, 2016

- **Team Polling Web application:**
  - Designed and built a Polling and Feedback application using Django that was deployed on the HPE cloud.
  - The application proved to be an effective productivity tool and was adopted by the Hybrid-APJ cloud computing team.

**TEACHING EXPERIENCE**

**Teaching Assistant, CS1010X: Programming Methodology**  
Jan, 2019 - June, 2019, Instructor: *Dr. Ben Leong, Mean Student Rating: 4.1/5.0*  
Jan, 2020 - June, 2020, Instructor: *Dr. Tan Tiow Seng, Mean Student Rating: 4.4/5.0*

**Teaching Assistant, CS1231S: Discrete Structures**  
Jan, 2021 - May, 2021, Instructor: *Dr. Aaron Tan, Mean Student Rating: 4.7/5.0*

**Teaching Assistant, CS5229: Advanced Computer Networks**  
Aug, 2021 - Dec, 2021, Instructor: *Dr. Ben Leong*