Benny Rubin

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Research Interests

- Networking, Operating Systems and Architecture.

Education

Cornell University | GPA: 4.0 | Fall 2021 – (Expected) December 2024

· B.S. Computer Science (College of Engineering)

Honors/Awards:

- Cornell **Quill and Dagger** senior honor society
- 2024 CRA **Outstanding Undergraduate Researcher Award** honorable mention
- **Teaching Excellence Award** from Cornell Computer Science department for CS 4410 (Operating Systems), Fall 2023 and Spring 2024
- Visiting Scholar at **Max Plank Institute** Pre-doctoral Research Program in Saarbrucken, Germany, 2023
- Cornell College of Engineering **John McMullen Dean's Scholar**, 2021

Publications

- **Fast and Safe IO Memory Protection**
  Benny Rubin, *Saksham Agarwal, Qizhe Cai, Rachit Agarwal*
  ACM SOSP 2024
- **Autonomic Passive IT-OT Device Classification in ICS/SCADA Networks**
  Benny Rubin*, Ali Tekeoglu, Christopher Rouff*
  IEEE CSR ACSICS Workshop 2024
- **Hydra: Effective Runtime Network Verification**
  Sundararajan Renganathan, ***Benny Rubin****, Hyojoon Kim, Pier Ventre, Carmelo Cascone, Daniele Moro, Charles Chan, Nick McKeown, Nate Foster*
  ACM SIGCOMM 2023

Experience

Lawrence Livermore National Lab | Summer 2022

· Built an interactive honeypot environment modeling Industrial Control Systems and analyzed the network traffic for threat detection
· Evaluated mechanisms and effectiveness of popular IoT scanning tools such as Shodan and Censys
· Competed in red teaming CTF challenges involving forensics, web exploitation, crypto, and pwning

Johns Hopkins University APL | Summer 2019, Summer 2020 – Summer 2021 (Gap year)

· Led a team, working on a large software project for fingerprinting and scanning Industrial Control Systems networks.
· Worked on the stress testing team for ACASX, an FAA funded Collision Avoidance System in collaboration with MITLL. Analyzed millions of aircraft encounters using custom built statistical analyses tools (Project won an R&D 100 award)

Teaching Experience

- TA for Computer Systems Organization and Programming, spring 2022
- TA for Operating Systems, fall 2022, spring 2023, Fall 2023
  - Fall 2023: ran weekly recitations and created new course work and exam questions