ELIOT H. SOLOMON

www.eliot.so • Pittsburgh, PA

EDUCATION

Carnegie Mellon University May 2029
PhD in Computer Science (Advisors: Dimitrios Skarlatos and Todd C. Mowry) *Pittsburgh, PA*

Rice University August 2024
MS in Computer Science (Advisor: Alan L. Cox) *Houston, TX*
Thesis: *Effective Techniques for Managing Intermediate-Sized Superpages*
Awards: Rice CS Graduate Research Fellowship (full funding), Louis J. Walsh Scholarship in Engineering

Rice University May 2023
BS in Computer Science (Specialization: Computer Systems) *Houston, TX*
GPA: 3.98/4.00, *summa cum laude*
Awards: Outstanding Senior Engineering Student (CS), Rice Engineering Alumni Junior Merit Award, Chevron Scholarship, McMurtry Committee of the Year, McMurtry Academic Award, President's Honor Roll, National Merit Scholar

EXPERIENCE

RiceArch Group, Department of Computer Science, Rice University May 2021 - August 2024
Research Assistant *Houston, TX*

- Collaborated with Prof. Alan Cox to implement transparent 64KB superpage support into FreeBSD on ARM CPUs (info)
- Achieved a 15.67% speedup on a compilation-heavy workload and upstreamed multiple new patches to mainline FreeBSD
- Collected empirical performance counter data to investigate the PTE Coalescing feature of AMD's Zen microarchitecture

Department of Computer Science, Rice University July 2020 - December 2023
Teaching Assistant (Head: COMP 614, 2 × COMP 321, MCS Bootcamp; 2 × COMP 182, COMP 215) *Houston, TX*

- Oversaw the TA team and developed grading tools for COMP 321, an intro computer systems course with 210+ students
- Held office hours and proofread exams for COMP 182/215, discrete math and OOP classes with 300+ and 250+ people
- Developed 25 quizzes and 5 problem sets to help optimize learning outcomes for a group of incoming master's students

Bioinformatics Group, Department of Computer Science, Rice University May 2020 - December 2020
Research Assistant *Houston, TX (Remote)*

- Evaluated statistical methods for inferring evolutionary networks from genetic data, working under Prof. Luay Nakhleh
- Automated data generation, parsing, and analysis using a computational pipeline built using 2000+ lines of Python code
- Improved result accuracy by running repeated large-scale simulations in a large university cluster computing environment

PUBLICATIONS

Eliot H. Solomon, Yufeng Zhou, and Alan L. Cox. 2023. An Empirical Evaluation of PTE Coalescing. In *The International Symposium on Memory Systems (MEMSYS '23)*. ACM, New York, NY, USA, 16 pages. (preprint)

PERSONAL PROJECTS

MurtPass Java, jte, PostgreSQL, HTML/CSS/JavaScript

- Built a customized ticketing and access control system tailored to the needs of McMurtry's "public party" Y2K (press)
- Implemented features like Google Sign-In, QR code scanning, an automated waitlist, and a Venmo payment tracking tool
- Deployed the system to a secure Linux cloud server, achieving consistent sub-40ms response times even with 2000+ users

LEADERSHIP AND ACTIVITIES

McMurtry College, Rice University September 2019 - May 2023
Seniors Cmte. (2022-23), External Socials Head (2021-22), Treasurer (2020-21), First-Year Rep. (2019-20) Houston, TX

- Coordinated Y2K, the first "public party" at Rice following the COVID-19 pandemic, with 900+ student attendees (press)
- Designed a streamlined expense management system for the $50K+ yearly budget of a 400+ student residential college
- Researched student needs through focus group sessions to help develop a detailed five-year strategic plan for the college