ROSS MIKULSKIS
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EDUCATION

Boston University
PhD Computer Science — Start 09/2025
- Specialization in Real-time Operating Systems

BA/MS Computer Science — Expected 05/2025
- Cumulative GPA: 3.72/4.0
- Thomas M. Menino Scholarship recipient (full-tuition)
- Notable Courses: Object Oriented Design (CS611), Cloud Computing (CS 528), Operating Systems (CS 552), Algorithms (CS 630), Machine Learning (CS 542), Functional Programming (CS 320)

WORK HISTORY

BU Student Researcher under Rich West, Boston University — 07/2024 - Present
- **RT-DDS**: Built a publisher-subscriber real-time data distribution service on the Quest real-time OS and Linux
- RT-DDS is the only data distribution service on a real-time OS, meaning it can provide unparalleled timing and predictability guarantees in contrast to GStreamer or ROS/ROS2.

BU Red Hat Collaboratory, Boston University — 09/2023 - 07/2024
- **Unikernel Linux**: Hacked Linux to dynamically link applications to the kernel for performance gains in industrial workloads (e.g., improved Redis throughput by 22%)
- **OPE Gradescope Bridge**: Implemented scalable OpenShift service REST API for grading student assignment code in Open Education Framework
- **OPE Testing**: Automated testing in container build process with GitHub Actions shell and Jupyter Notebook tests; reduced container build time by 70% using mamba

Teaching Assistant, Boston University, Boston, MA — 09/2022 - Present
- Taught CS 131 (Combinatorics) for two semesters and CS 330 (Algorithms) for 5 semesters

Publications

- Ross Mikulskis, Peter West, Rafi Syed, Zhiyuan Ruan, Richard West. **"RT-DDS: A Real-Time Data Distribution Service for Task Pipeline Processing"**, manuscript in preparation

PROJECTS (www.github.com/rkulskis)

Bits of CS Inc., Independent — 03/2023 - Present
- Founded a nonprofit for free online education.
- Authoring a computer science textbook covering college-level curricula (www.bitsofcs.com)
- Earned $700 from BU Student Academic Enhancement Fund

Standalone Operating System, School — 12/2023
- Co-developed a virtual disk in C and Assembly on intel i386 architecture with FIFO thread scheduling, inode-based file system, dual-mode system calls, and memory mapping

SKILLS AND INTERESTS

- **Coding Skills:** C/C++, Kubernetes, Python, Rust, Docker, Git, Bash, Emacs, FlutterFlow
- **Interests:** Operating systems, charity, Jazz trumpet, guitar, magic tricks, fitness

VOLUNTEER WORK

Big Brothers Big Sisters of Eastern Mass — 10/2023 - Present
- Volunteer as a Big Brother in BU on-campus community program
- Connect for 4 hours through sports and games with little brother every 2 weeks

Charity Runner in Falmouth Road Race — 08/2023
- Raised $850 in funds for *Soccer Without Borders Boston*

Fundraising Chair, Phi Kappa Tau — 01/2023 - 05/2023
- Installed shared Linux server for STEM majors in fraternity
- Organized a concert with Berklee student-led bands with net profit of $800

HONORS AND AWARDS

- **Hariri Institute Student Excellence Award**, Boston University — 06/2024