ROSS MIKULSKIS

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EDUCATION

Boston University
MS Computer Science   Expected 05/2025
  - Dual degree program with BA

BA Computer Science   Expected 05/2025
  - Cumulative GPA: 3.7/4.0
  - 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 tested with DSP at 44kHz or 25 microseconds.
  - 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 4 semesters
  - Lead 2 hours of classroom discussions and 3 office hours each week
  - Curate weekly problem sets in graph analysis and dynamic programming
  - Grade student exams

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 for RTAS
    '25

PROJECTS (www.github.com/rkulskis)

Fraternity App, Independent   01/2024 - Present
  - Leading an agile team in developing an app in FlutterFlow to help greek life organizations orchestrate
    events with a shared calendar and send messages
  - Prototyed designs in Figma for Phi Kappa Tau

Bits of CS Inc., Independent   03/2023 - Present
  - Founded 501(c)(3) 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:** Python, Rust, C/C++, JavaScript, Docker, GitOps, Bash, OCaml, SQL, Go, Open-
    Shift, Emacs, FlutterFlow, Typescript, HTML, Nextjs, Figma
  - **Interests:** Operating systems, blockchain, 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

- **Cannabis Startup Competition Finalist**, Boston University 11/2022