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ROSS A. MIKULSKIS

Ross Mikulskis is a kernel engineer specializing in real-time and distributed systems, with 2 years of experience.

SKILLS

- **Languages**: C, Python, Assembly (x86), Rust, OCaml, Java, TypeScript, SQL, Terraform
- **Frameworks**: Docker, QEMU, Linux, Kubernetes / OpenShift, CI/CD, Kernel Modules, Cloud Infrastructure (GCP, Azure), Serverless, ROS 2
- **Tools**: Emacs, GNU Debugger (gdb), Python Debugger (pdb), Make, GitHub Actions

EDUCATION

Boston University - Full Tuition Merit Scholarship — **September 2021 - May 2025**
M.S. Computer Science, GPA: 3.86
B.A. Computer Science, GPA: 3.65

EXPERIENCE

ProDex Labs — **May 2025 - October 2025**
Founding Engineer — Brooklyn, NY

Optimized factory workflows using LangGraph AI-driven Monte Carlo simulations.

- Overhauled a single-container simulation system into a serverless microservice architecture to capture stochacitiy by running thousands of simulations in parallel.
- Minimized customer onboarding time by developing CI/CD Terraform pipelines to deploy into customer-owned GCP and Azure VPCs.

Boston University — **July 2024 - May 2025**
Researcher — Boston, MA

Developed kernel drivers and real-time applications for the Quest RTOS and Linux.

- Built a pub/sub framework to dispatch task pipelines with end-to-end real-time QoS guarantees across Linux and an RTOS running on a partitioning hypervisor.
- Enhanced system stability by fixing Sound Blaster 16 audio drivers and file system drivers.

Red Hat — **September 2023 - July 2024**
Cloud Engineering Intern — Boston, MA

Conducted research and worked with the Mass Open Cloud team.

- Revised the Linux kernel to dynamically link with Redis, improving throughput by 22%.
- Implemented a serverless OpenShift proxy for Gradescope to autograde code requiring specific kernel versions on the Mass Open Cloud, saving professors hours of manual grading.
- Reduced container build times for the Open Education Project by 70% using Python Mamba and GitHub Actions caching.

PROJECTS

Distributed Consensus github.com/rkulskis/raft

Implemented the Raft consensus algorithm within ROS 2 to ensure state durability and fault tolerance in real-time robotic systems.

Bits of CS bitsofcs.com

Published a free online computer science textbook and founded an educational non-profit with a grant from Boston University.

SubsVocab github.com/rkulskis/subsvocab

Developed a Rust CLI tool to parse Netflix subtitles and generate frequency-sorted Spanish-to-English vocabulary lists.