

# Michael Rivnak

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## INFORMATION

### CONTACT

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### LINKS

mrivnak.github.io  
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github.com/mrivnak

## EDUCATION

### WENTWORTH INSTITUTE OF TECHNOLOGY

Bachelor of Science  
in Computer Science  
Graduated: Dec. 2020

## COURSEWORK

### UNDERGRADUATE

Data Structures  
Algorithms  
Digital Logic  
Databases  
Operating Systems  
Network Programming  
Applied Cryptography  
Parallel Computing  
Software Engineering  
Systems Administration

## SKILLS

### PROGRAMMING

C++  
Java  
JavaScript  
Python  
Rust

### FRAMEWORKS

Django  
Electron

### TOOLS&TECHNICAL

Git Version Control  
Linux/Unix  
Shell Scripting  
Systems Administration  
Object-Oriented Design

### PROFESSIONAL

Agile/Scrum

## EXPERIENCE

### CONTENT SPECIALIST INTERN | JONES AND BARTLETT LEARNING

May 2019 – Aug 2019 | Burlington, MA

- Assembled applications to automate and optimize workflows
- Integrated applications with REST API endpoints within a content management system
- Designed Application Programming Interfaces (APIs) to facilitate creation of an extensible application suite
- Maintained proper software documentation and distribution to ensure ease of use

### RESEARCHER | WENTWORTH INSTITUTE OF TECHNOLOGY

Jan 2020 – Apr 2020 | Boston, MA

- Collected relevant information on the applicability of Real-Time Operating Systems to a collegiate operating systems curriculum
- Analyzed and understood the strengths and weaknesses of using a RTOS over a traditional OS in various circumstances
- Demonstrated high-level written and oral communication skills in a published paper and conference presentation on the topic

## PROJECTS

### UNDERWATER REMOTE OPERATED VEHICLE (ROV) [GROUP]

IEEE WENTWORTH | SOFTWARE TEAM

Sept 2019 – Present | Python, ROS

- Integrated microcontrollers with high-level Python libraries
- Designed interface to communicate with ROV from control computer

### GAME BOY EMULATOR [GROUP] | SENIOR PROJECT

May 2020 – Aug 2020 | C++, CMake

- Leveraged existing documentation to create a software emulator for the Nintendo Game Boy CPU
- Implemented register, memory, and state management systems

### FORUM[GROUP] | WEB DEVELOPMENT

May 2020 – Aug 2020 | Python, Django

- Utilized Django framework for flexible full-stack development
- Leveraged SQLite database for efficient data storage and organization
- Integrated Bootstrap components for a modern UI within Jinja templates for incredible flexibility

### RVPKG-RS | INDEPENDENT

Dec 2020 – Feb 2021 | Rust

- Utilized binary-tree embedded database for minimal runtime dependencies
- Analyzed product requirements for both ease of development and simplicity of use

## PUBLISHED WORK

### REAL-TIME OPERATING SYSTEMS: COURSE DEVELOPMENT

Published in: Advances in Parallel & Distributed Processing, and Applications (ISBN 978-3-030-69984-0)

- Investigated real-time operating systems and their applicability to a university operating systems curriculum