Aaron Ky-Riesenbach

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Education

Northeastern University, Boston, MA — May 2025
Bachelor of Science in Computer Engineering, 3.72 GPA, Dean's List
Coursework: Physics 2, Calculus 3, Differential Equations/Linear Algebra, Computing Fundamentals, Circuits and Signals, Embedded Design, Digital Design

Skills

Electronics: Microcontrollers, PCB design, hardware prototyping/debugging, I2C/SPI/serial communication, soldering
Software: Linux, Office suite, LaTeX, JetBrains IDEs, Git, MySQL/MariaDB, AWS
Programming: Java, JavaScript/TypeScript + React, C++, Python (certified Microsoft Tech. Associate), SQL, shell

Work Experience

Northeastern University Institute for the Wireless Internet of Things, Boston, MA — September 2022 - Present
Software Engineer (undergraduate research position)

- Identifies issues and weaknesses in current implementation of wireless network emulator resource manager
- Successfully reimplemented resource allocation kickoff workflow to significantly improve efficiency
- Collaborates with supervisors to develop and implement fixes and improvements
- Tests improvements using version control system and pre-production environments to ensure functionality

Tesla Government, Falls Church, VA — March 2020 - August 2021
Software Developer, QA Test Engineer

- Company is independent research and knowledge management agency under contract with government and other partners
- Developed and tested complex new features for knowledge management system based on microservice architecture
- Tracked and fixed bugs reported by users and developers
- Performed manual functionality and security tests for new features and services prior to release
- Developed complete automated test suite to ensure functionality and code coverage using Selenium
- Managed continuous integration and deployment system via Jenkins
- Praised by supervisor for rapid skill development and adaptation

Projects

"Hot Arduino" microcontroller-based game — November - December 2021

- Arduino-based hot potato game playable by up to 10 players
- Utilized MMA8451 accelerometer module, vibrational motors, buttons, and LEDs for user interface
- Designed and built multiple revisions of prototype circuit boards and enclosures by hand

GPS bike tracker — July 2019

- Designed and fabricated GPS bike tracker through Northwestern IoT design program
- Tested hardware and firmware designs against functionality constraints, including size, weight, battery life, and security
- Created prototype circuit boards and enclosures using GPS module, accelerometer, Blynk platform, and more
- Debugged using logic analyzer

Activities

Northeastern University Outing Club (NUHOC) — September 2022 - Present

- Member of climbing leadership, organizes rock climbing outings and events
- "Loj Committee" trainee, develops skills and helps to maintain club camping facilities located in New Hampshire; provides general club leadership

Northeastern University Men's Rowing, Division 1, Coxswain — September 2021 - May 2022

- Facilitated on-the-water practices by steering and making technical corrections
- Led land practices and workouts
- Communicated with coaches and athletes to coordinate logistics, obtain training data, and perform other duties as required
- Devoted 25-30 hours per week to athletics while undertaking full course load