Brandan Roachell

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EDUCATION

UNIVERSITY OF TENNESSEE, KNOXVILLE (UTK)   August 2019 – December 2022
- B.S. in Computer Science, Honors Concentration
- Minor in Mathematics
- Cumulative GPA: 3.98/4.00
- Relevant coursework: Software Engineering, Software Security, Systems Programming, Operating Systems, Compilers, Probability and Statistics, Numerical Analysis, Data Mining and Analytics

WORK EXPERIENCE

COURSERA   Remote
Software Engineer Intern   May 2022 – August 2022
- Migrated a service and its dependencies from Scala to Java, including creating gRPC service definitions and protobufs, writing mappers and unit tests, and contributing records, clients, and API endpoints to shared libraries
- Utilized gRPC UI in Spring Boot and Sumo Logic logs to manually test and debug my project
- Analyzed metrics on Datadog and Sumo Logic logs to resolve a recurring latency issue in another application and quickly deployed a fix to the related external API call timeout configuration

GCLAB   Knoxville, TN
Undergraduate Research Assistant   January 2021 – Present
- Investigated the reproducibility of the first black hole images by using specialized imaging software to process radio wave datasets; developing a workflow with limited information; and creating documentation for my methods, making the original results significantly more accessible to the public
- Implemented GPU programs to benchmark the efficiency of GPU-CPU data copying and comparison operations at different granularities and plotted the results with Matplotlib
- 1 published poster and 1 published paper

UTK   Knoxville, TN
Undergraduate Teaching Assistant   Spring 2021, Fall 2021, Fall 2022
- Demonstrates ability to break down complex assignments and fundamental DSA concepts to students in weekly lab sessions and contributes notes and answers to online class discussion board

TICKETS FOR A CAUSE   Memphis, TN
Web Developer Intern   July 2018 – August 2018
- Co-developed a website using Bootstrap that would allow event organizers to donate unused event tickets to a participating charity in their area
- Applied my Java, HTML, CSS, and MySQL knowledge to develop front-end/back-end and implement a database for accounts, user-submitted forms, and ticket uploads

SKILLS

Languages: C++, C, Java, Python, Assembly (MIPS, NASM), HTML/CSS/JS
Frameworks: gRPC, Spring Boot, React, Node.js, Next.js, Tailwind CSS, Django, Bootstrap
Development: Git, Unix environments, Datadog, Sumo Logic, Jira, Docker

ACTIVITIES AND AWARDS

VEX U ROBOTICS   August 2019 – Present
- Serves as vice president and has 3 years of experience as programming lead for UTK's competitive robotics team
- Writes C++ programs that enable custom robots to reliably perform specific tasks autonomously using sensor data, trigonometry, odometry, and PID control algorithms
- Manages team Git repository, instructs new recruits, delegates programming tasks, and assures functionality of all work
- **2021 VEX U Robotics World Championship**: Won both **Tournament Champion** and the **Excellence Award**, the highest award presented in the VEX Robotics Competition, for superior performance in design innovation, build quality, autonomous programming, oral communication, and documentation
- **2022 VEX U Robotics World Championship**: Won the **Think Award** in our division for reliable autonomous programming, well-documented code, and a clear programming strategy