**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 Datadog metrics 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-like 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