

## FULLSTACK WEB DEVELOPER & MULTIFACETED CS RESEARCH ASSOCIATE SUMMARY

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- Undergraduate Clemson Honors computer science student with a minor in cybersecurity and established development experience in fullstack web development, robotics, and network communications.
- Competed in VEX Robotics (C++, Vex PROS) for seven years on state, national, and worldwide levels, with additional robotics experience surrounding academic research.

## WORK EXPERIENCE

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### MIT LINCOLN LABORATORY

Explored the effects of impaired network communication links on UAV communications in ISR missions (particularly pertaining to object detection and tracking). Developed an adaptive data transfer mechanism with packet prioritization on the premise of visual importance. Integrated q-learning to derive feedback loop parameters on the server side, aiming to maximize detection consistency and minimize the number of lost "priority" packets (i.e., information-critical data) per video frame transmission. Collected and analyzed results after implementation according to the known efficacy of researched contributions in the field; discussed results with Tactical Networks research employees and other research groups.

### TACTICAL NETWORKS RESEARCH INTERN

*June 2023 - August 2023*

### LPL FINANCIAL

Collaborated with a small team in real-time web development (focus on frontend), reworking a financial advisory web platform to achieve an end goal of flexibility, responsiveness, and compliancy. Completed stories in Jira Software to maintain a steady workflow using Agile development techniques and a microservice architecture. Established development experience in Angular, Typescript, and HTML/CSS, with additional exposure to C# and Java.

### SOFTWARE ENGINEERING INTERN

*June 2022 - December 2022*

## EDUCATION

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### CLEMSON UNIVERSITY

First-semester senior undergraduate in the Clemson Honors College, GPA of 3.96. Programming & Documentation Lead of VEXU Robotics Team BCUZ, 2021-2023, with 4 awards on the national level. Competed in 2021, 2022, and 2023 World Championships. Research team member for ground vehicle & autonomous vision development, 2021-2022.

### BACHELOR OF SCIENCE IN CS, MINOR IN CYBERSECURITY

*January 2021 - December 2023*

*Relevant Courses:* DB Management Systems (MySQL, Java), Seminar in Prof. Issues II (HTML, TypeScript, CSS, Python), UAV/CV Research Independent Study (Python), Computer Security Principles (Python), Programming Systems (Prolog, OCaml), Intro to Software Engineering, Intro to OS (C), Networks and Network Programming (C, Python), Human and Computer Interaction, Algorithms and Data Structures (C++), Intro to Computer Organization (C), Discrete Mathematics, Software Development HON (Java, MySQL, AWS), Calculus of Several Variables, General Engineering, Computing Ethics, Linear Algebra, Programming Methodologies (C, C++).

### DUTCH FORK HIGH SCHOOL

*Organization President* of the Dutch Fork VEX Robotics Organization, consisting of five competitive robotics teams. *Programming & Documentation Lead* of teams 7432E and 7432C, with 20 state-level awards. Second highest programming score in division at the 2018 VEX World Championship.

*State Secretary of SCTSA*, 2019-2020, serving to lead delegation conferences throughout the year. 6 state-level awards in problem solving, essays on technology, scientific visualization, and web design, and 6 in VEX Robotics. Placed 12th nationally for TSA VEX 2019.

### STEM DEGREE IN MATHEMATICS AND ENGINEERING

*August 2016 - June 2020*

## SKILLS

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Languages: Java, C++, C, Python, MySQL, TypeScript, CSS, HTML, JavaScript, Prolog, OCaml, Swift.  
Tools & Platforms: Angular, Linux, CORE Emulator, OpenCV2, Microsoft AirSim, ROS, Amazon AWS RDS & EC2, JUnit, JDBC, Git, Jira Software, Unreal Engine, Bootstrap.

## INTERESTS

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Building PCs, hiking the waterfalls around Clemson, discovering new ways to express myself through music, art, and dress, mechanical keyboards & typing, and playing games with my friends on my PC and Nintendo Switch.