# Ryan Leigh

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## EDUCATION

**B.S. Computer Science (Cybersecurity), Physics Minor** Expected May 2025
Arizona State University, Tempe, AZ 4.00 GPA
Barrett, The Honors College

## TECHNICAL SKILLS

**Programming Languages**: Java, JavaScript, Python, Scheme, C/C++, Assembly
**Front-End**: HTML, CSS
**Tools, Databases, and OS:** GitHub, Windows, Linux/Unix, ArcGIS, TensorFlow, PuTTy, VS Code, Eclipse, Dev C++

## PROFESSIONAL EXPERIENCE

**U.S. Geological Survey (USGS): Data Science Research Intern** Fall 2022 - Summer 2023

- Utilized Python notebooks, TensorFlow, and Google's Inception-v3 convolutional neural network to enhance our understanding of wildfire risk assessment.
- Analyzed various flora and brush types to assess their flammability levels. This analysis enabled us to model and predict the likelihood of wildfires in specific areas. The team successfully secured substantial funding after Open Geo-Consortium's approval of our project proposal.
- Furthermore, the team maximized the potential of open citizen science by integrating user-submitted image data and GPS coordinates into our neural network, bolstering the effectiveness of our wildfire risk assessment efforts.

## RELEVANT PROJECTS

**JavaFX Chess, *Personal Project*** Spring 2023 - Summer 2023

- Developed a sophisticated chess application using JavaFX, showcasing a deep understanding of object-oriented programming principles. Leveraged key concepts including inheritance, polymorphism, abstraction, encapsulation, and data structures such as LinkedList to create an intuitive and engaging user experience.
- The JavaFX component of the application brilliantly employs a GridPane layout lined with a 2D array, meticulously designed to provide an aesthetically pleasing and highly functional chessboard interface.

**Accelerometer Filtering and Track Map**, ***ASU Motorsports - Formula SAE*** Fall 2022

- Utilized G-H and Kalman Filters to filter accelerometer data captured via CSV in Python, henceforth making data usable for driver trials. Work enabled the team to gain additional insight into choosing drivers based on analytical performance.
- Developed a track map in Python by mapping gathered GPS data to visualize racing lines. Additionally, color-coded the lines based on lateral acceleration and added functionality to overlap different lap racing lines to discern differences in lap times.

**Lead Programmer, *Chaparral Firebird Robotics*** Fall 2021-Spring 2022

- Programmed an autonomous and tele-operable robot in Java to compete in the 2022 FIRST Robotics Competition
- Intertwined proficiency in Java with graduate level robotics control theory such as PID and trajectory control
- Learned to work in a team-building atmosphere

## EXTRACURRICULAR EXPERIENCE

**Cybersecurity Hands On Problem Solving Cohort** Spring 2023 - Spring 2023

- Selected into a cohort amongst 11 other students to train real life skills in cybersecurity such as threat modeling, SecOps incident response, endpoint protection, communication, and the business of cyber security.
- Simulates real life experiences such as analyzing ransomware attacks using Splunk, QRadar, Security Onion, and deployed AppScan to test vulnerabilities within an application.

## VOLUNTEER EXPERIENCE

**FIRST Robotics Competition Mentor/Alumni - *Chaparral High School*** Spring 2023 - Present

- Former student within the FIRST robotics program who now coaches and mentors high school students concerning programming. Leads students to make good team decisions and lead in high-stress situations.

## WORK EXPERIENCE

**Lifeguard, *Morey's Piers* - Wildwood, NJ** Summer 2023

- Demonstrated exceptional water safety skills by proactively preventing accidents and ensuring a safe swimming environment. Completed Ellis and Associates Lifeguard Certification and was trained for deep water rescue.
- Demonstrated leadership, responsibility, accountability and cultivated a safe, friendly, and fun experience for guests

**Ride Operator, *Morey's Piers* - Wildwood, NJ** Summer 2021

- Ensured the safety of riders by performing pre-ride safety checks and enforcing ride guidelines and procedures. Provided excellent customer service by assisting riders, answering questions, and resolving issues in a friendly and courteous manner.