Sofiane Lachab

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Education

University of South Carolina – Columbia
Columbia, SC — May 2028
Bachelor of Science in Computer Engineering — GPA: 4.0

Awards/Honors/Scholarships
Honors College, SC Palmetto Fellows, National Merit Finalist, Presidential Scholar, Provost Scholar, Dean's Scholar, Michelin North America Scholarship

Coursework
Algorithmic Design I-II, Linux/Unix Fundamentals
Calculus I-II and Vector Calculus, Physic I-II

Relevant Experience

University of South Carolina – Columbia (Dr. Nikolaos Vitzilaios) — **Columbia, SC**
Undergraduate Research Developing a Water Sampling Drone
December 2024 – Present

- Improving efficiency of water sampling using an autonomous drone
- Utilizing Linux, ROS, and OpenCV
- The current product gathers three samples in one short flight

SC Governor's School for Science and Mathematics — **Hartsville, SC**
Programmer for Autonomous Golf Cart Project
January 2024 – May 2024

- Programmer on working to progress golf cart project to not need a human driver
- Primarily used C++, Python, and Arduino Nano
- Result: golf cart was functional through Arduino, driven through a gamepad controller

SC Governor's School for Science and Mathematics — **Hartsville, SC**
Head Programmer for FTC Robotics Team 22534
August 2024 – March 2025

- Head programmer for Team 22534 to ensure the robot was programmed to complete tasks
- Programmed in Java utilizing Android Studio and the FTC library
- Included autonomous trajectories, object detection through camera utilizing a TensorFlow model, and motor/servo control through gamepad controllers

University of South Carolina – Columbia (Dr. Ming Hu) — **Columbia, SC**
Research Internship Studying Material Science Using AI Models
June 2023 – July 2023

- Studied crystal structures properties for optimal energy handling in search of potential superconductors
- Utilized VASP calculations as well as the DeePMD machine learning model for analyses
- Found optimal lithium concentration for energy in a sodium lithium oxide compound

Skills

Programming: Java, Python, Linux, HTML/CSS, C++ (Novice), Arduino (Novice)
Basic Hardware and Circuitry Background
Strong Math and Physics Background