

Carter Long

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SUMMARY	Mechanical engineering sophomore at Virginia Tech seeking a Summer 2026 internship in mechanical design, controls, or systems design. Strong hands on experience with CAD, sensor integration, embedded systems controls, & initial prototyping through different design teams, jobs, & personal projects.	
EDUCATION	B.S. Mechanical Engineering, Minor: Computer Science , Expected graduation: May 2028 Virginia Tech, Blacksburg, VA GPA: 3.97, President's List (Fall 2024 - Spring 2025), Dean's List (Fall 2025)	
SKILLS	CAD: AutoCAD, Autodesk Inventor, SolidWorks, SolidWorks PDM Software: MATLAB, LTspice, Arduino, Java Hardware: Microelectronics, Soldering, Wiring, WoodWorking, 3D Printing	
EMPLOYMENT	Mechanical/Systems Intern: Novarity Summer 2025 <ul style="list-style-type: none">Worked as part of a small team to design, build, & test an off-grid fully autonomous ground station using neuromorphic sensors to detect Low Earth Orbit (LEO) satellitesResponsible for design and testing of visual calibration test stand & algorithm development, through the use of numerical methods, for transforming event based sensor readouts into observation dataResponsible for overall sub-system physical and mechanical interface design, production (3D printed components), and integration of the remote ground station Summer Swim Coach: Stone Ridge Sharks/Lenah Mill Marlins Summer 2017-Summer 2024 <ul style="list-style-type: none">Junior & Assistant coach assisting with organizing and running team practices and events for team of 170 swimmersCoached swimmers aged 7-18 to learn all four strokes & increase their swimming proficiencyServed as a role model for swimmers aged 4-7, teaching them self-proficiency while swimming Lifeguarding: High Sierra Pool Company Summer 2023-Summer 2024 <ul style="list-style-type: none">Ensured patron safety and facility operations through active surveillance, chemical testing, and emergency preparedness	
EXPERIENCES	Electric Go-Kart: Personal Project <ul style="list-style-type: none">Designed, researched, & manufactured a street legal go-kart as a personal project that implements safety features, using a combination of repurposed and new manufactured componentsDesigned an integrated electronic system for throttle/brake control & steering, while also utilizing a rechargeable battery powered electronic systemDesign and constructed an interchangeable suspension system, allowing the go-kart to be converted to a functioning drift-kart and back Astroboatics <ul style="list-style-type: none">Worked on chassis/drivetrain for a Mars space rover that investigates a site for life, completes field tasks, performs dexterous operations, and autonomously traverses terrainTasked with researching motors and gearboxes for competition robotTasked with designing & constructing suspension and stability testing rig for wheels and suspension system to help determine if the system will be able to operate in competition Baja SAE <ul style="list-style-type: none">Worked on fleet maintenance team sub-system: tasked with repairing broken parts & keeping vehicles operationalHelped maintain and keep off-roading competition vehicles running for competitions and testing	2025-Present 2025-Present 2024-2025
LEADERSHIP & ACTIVITIES	American Society of Mechanical Engineers, 2025-Present Virginia Tech Swim Club, 2024-Present High School Varsity Swim Captain, 2022-2024 High School Marching Band Section Leader, 2022-2024	