



## Research Engineer

### Company

The Global Center for Automotive Performance Simulation (GCAPS) operates in many areas of the mobility eco-system to support tool and technology development. The services provided by GCAPS include tire test characterization, tire modeling, vehicle dynamics modeling, scenario development, environment and event modeling, sensor modeling, control algorithm development, simulation support, and research and performance analysis. GCAPS has a global customer base that includes vehicle manufacturers, technology companies, tire manufactures, and motorsport teams. GCAPS is engaged with a wide spectrum of mobility thought leaders from around the globe and exists to advance mobility technologies, enable job creation, and promote economic development in Southern Virginia. We are an organization built on core values. GCAPS hires, rewards, and recognizes employees based on the adherence to our values and behaviors.

We are proud to be an affiliated company to Virginia Tech and the Virginia Tech Transportation Institute.

Check us out at [www.gcaps.net](http://www.gcaps.net)

### Position

As a Research Engineer at GCAPS, you will apply domain knowledge and expertise to expand the company's modeling, testing, and simulation offerings and find innovative ways to improve the company's existing processes. The current focus of our organization is in the realm of advanced driver-assistance systems (ADAS) and autonomous vehicle development. This role will initially focus on algorithm development for these projects.

### Duties

Engage in proof-of-concept work and perform early-stage product development.

Support and develop analytical and algorithm solutions for technical projects.

Understand the state-of-the-art and its evolution for current projects; attend relevant industry and academic conferences.

Conduct literature reviews to support proof of concept work.

### Required Critical Competencies

*Flexibility/ adaptability* – Adjusts quickly to changing priorities and conditions. Copes effectively with complexity and change.

*Analytical skills* – Able to structure and process qualitative or quantitative data and draw insightful conclusions from it. Exhibits a probing mind and achieves penetrating insights.

*Efficiency* – Able to produce significant output with minimal wasted effort. Attention to detail.



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### Core Values and Behaviors

#### Core Value 1: Driven to success

*Innovation* – New ideas, methods, processes, technologies with the future in mind.

*Logical Truth* – Providing solutions based on fact and reason.

*Engaged* – Passionate dedication to scientific learning that benefits our clients and advances our employees growth.

*Flawless Execution* – Profound understanding of the task and recognition that all steps of a project are critical. Tasks are completed above expectations and on time.

*Resolve* – Endless quest for solutions to advance our client’s mission and employees work-life balance.

#### Core Value 2: Developing trust between our employees and partners

*Integrity* – Honest, consistent, reliable, and fair. We take commitments seriously.

*Communication* – Two-way process to transfer relative information, in the right medium with clarity and concision, in a timely manner.

*Trust* – Upholding trust and common ground between our employees and our clients. We build and maintain solid relationships.

*Influential* – Thought leaders for new methods, processes, and technologies with no restrictive bounds that would impede advancement.

### Basic Education Requirements

Bachelor’s degree in computer science, engineering, mathematics, or another quantitative discipline.

### Preferred Educational Achievements and Experience

Master’s degree or PhD in computer science, engineering, mathematics, or another quantitative discipline

Prior development experience with MATLAB and Simulink or other computational tools

Familiarity with mathematical optimization and physical systems modeling.

Experience with algorithm development for physical based systems

Background in automotive simulation, signal processing, and/or computer vision



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### Location

We are located at Virginia International Raceway in Alton VA. Which is near Danville and South Boston VA, Roxboro NC and 45 minutes from Burlington NC, 60 minutes from Durham NC.

### Equal Employment Opportunity

To give equal employment and advancement opportunities to all people, employment decisions at VTT, LLC are made based on each person's performance, qualifications, and abilities. VTT, LLC does not discriminate against employees, students, or applicants based on age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, veteran status, or any other basis protected by law.

The Equal Employment Opportunity policy covers all employment practices, including selection, job assignment, compensation, discipline, termination, and access to benefits and training.

### We participate in E-Verify

E-Verify is an Internet-based system that compares information from an employee's Form I-9, Employment Eligibility Verification, to data from U.S. Department of Homeland Security and Social Security Administration records to confirm employment eligibility.