Richard Carnivale

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Education

University of Florida - Gainesville, Florida **July 2023 – May 2027**
Bachelor of Science in Computer Engineering
GPA: 3.91/4.00
Relevant Coursework: Data Structures and Algorithms, Computer Graphics (Graduate Level), Computer Organization, Computational Linear Algebra, Applications of Discrete Structures, Calculus 3

Skills and Achievements

Technical Skills: Github, Unit Testing, Python, C++, TypeScript, React, JavaScript, Blender, MATLAB, Fusion 360
Awards: Best Freshman Hack at SASEHACKS 2023 and Rhonda Holt Scholarship

Technical Experience

SURFLAB Research Lab - *Gainesville, FL* **May 2024 – Present**
Research Assistant for Dr. Jorg Peters

- https://github.com/hachoj/SURFlab_mini/tree/richard-testing - 50+ downloads
- Assisted in the development of Polyhedral splines, a Blender add-on that converts quad-dominant meshes into B-spline patches, enabling real-time spline surface editing via Blender's polyhedral modeling capabilities.
- Focused on creating a simulated net around the generated surface by using tuples and mapping, allowing users to interact with what appears to be the net directly on the curves while controlling a polyhedral spline net mesh behind the scenes.

Verizon Fullstack Bootcamp – *Virtual* **June 2024– August 2024**

- Completed a ten-week intensive program covering full-stack development, including front-end, back-end, and cloud deployment using best-in-class design patterns and AI.
- Developed hands-on projects using cutting-edge technologies, focusing on software development best practices.

Solar Gators Design Team - *Gainesville, FL* **September 2023 – January 2024**
Strategy Team Member

- Helped maintain and improve a website using TypeScript, React, and HTML to manipulate and display live data of a Battery Management System (BMS) in a solar-powered car.
- Developed a script using Python to analyze 10,000+ lines of data on energy usage through a BMS to combine and derive important pieces of data for energy optimization in a solar-powered car.

Projects

Clean Society – HTML, CSS, and JavaScript **October 2023**

- Coded a website called Clean Society using HTML, CSS, and JavaScript, which allows people to find local beach cleanup events and organize their own environmental cleanup events.
- Won Best Freshman Hack Award for SASEHACKS hackathon at the SASE National Conference and received a $150 award for winning the category.

DSA Project 3 (Website) - https://github.com/Richard-Carnivale/project_3 **August 2024**

- Created an educational platform to visualize and interact with NBA statistics through the implementation of sorting algorithms like Quick Sort and Heap Sort using JavaScript, React, and CSS.
- Utilized NBA API for data, allowing users to explore, sort, and analyze player statistics, enhancing understanding of sorting algorithms through practical application.

Leadership and Involvement

Successful Transition for Undergraduates Program (STEPUP) **June 2023 - Present**
College of Engineering, University of Florida
STAR Mentor

- Mentored 47 first-year students in the STEPUP summer bridge program, leading over 15 academic, professonal, and personal workshop development sessions. Focused on enhancing study techniques, time management, and personal growth, resulting in over 30% improvement in academic performance in calculus, physics, and chemistry among participants.
- Led and coordinated electrical design and computational design within an engineering design group by writing and debugging C++ programs in an Arduino IDE and wiring electrical components to create a functional prototype of a handwashing device for kids.
- Learned attention to detail, planning skills, organization, and excellent communication