

Eli Campos

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EDUCATION

- **University of Florida** Gainesville, Florida
B.S. in Computer Engineering - GPA: 3.50/4.00 *Expected December 2025*
- **Undergraduate Coursework:** Programming I & II, Digital Logic and Computer Systems, Data Structures and Algorithms, Computer Organization, Computational Linear Algebra, Intro to Competitive Programming and Applied Machine Learning
- **Memberships:** ColorStack, Innogators Design Team and IEEE

PROJECTS

- **Formy(Arduino and C++):** Developed a PCB for a fitness device that tracks how well your form is during a power-lifting movement and counts the number of repetitions per set automatically while only modifying the barbell.
- **AVL Tree(C++):** Implemented a balanced AVL Tree in C++ to ensure efficient insertion, deletion, and search operations in logarithmic time.
- **NestQuest (HTML, CSS, JavaScript):** Co-developed a housing search service prototype aimed at identifying ideal living spaces based on user-specific criteria including hobbies, housing preferences, and budget. Features include an intuitive UI for input, dynamic search completion, and efficient data sorting using quick sort and merge sort algorithms. This project was selected as a finalist for the final project in the Data Structures and Algorithms class.
- **Custom CPU Design(Intel Quartus, VHDL):** Designed and implemented a custom CPU from scratch using Quartus for hardware synthesis and VHDL for the controller logic. Employed Karnaugh maps for optimization, state machines for control flow, and Read-Only Memory (ROM) for storing instruction sets.

SKILLS

- **Languages:** Python, C++, C, HTML, CSS, JavaScript, VHDL, ARM Assembly and MATLAB
- **Agile and Project Management:** Proficient in Agile development methodologies, serving as Scrum Master in class, with hands-on experience in conducting sprint planning, managing product backlogs, facilitating sprint retrospectives, and leading cross-functional teams to ensure effective project execution.
- **Machine Learning:** Supervised/unsupervised learning, regression/classification, ensemble methods (decision trees, random forests, bagging, boosting), SVMs, neural networks (CNNs), data preprocessing, hyperparameter tuning, cross-validation, dimensionality reduction (PCA), model evaluation.

EXPERIENCE AND ACHIEVEMENTS

- **Pennapps Hackathon(Flask, Firebase, Google Cloud Run, and Docker)** Philadelphia, Pennsylvania
University of Pennsylvania *September 2023 - September 2023*
 - Official 3rd Place MLH Winner of Overall Coding Competition
 - Developed the back-end of StudyHedge using Flask and Python, navigated challenges with Docker deployment, integrated the Twilio API, and utilized the Canvas API token to aggregate upcoming assignments and exams, allowing users to input personal events and preferences to generate a tailored study schedule with our extensive algorithm.
- **Machine Intelligence Lab(ROS, Gazebo, Linux, and Git)** Gainesville, Florida
University of Florida *May 2023 - August 2023*
 - Manage an extensive codebase using professional Git practices, ensuring efficient version control, and perform regular simulations to validate machine learning models and robotic systems.
- **Student Assistant for Physics Department** Gainesville, Florida
University of Florida *March 2023 - Present*
 - Leading departmental representation at academic events, enhancing communication and presentation skills at the University of Florida's Physics Department, and actively bridging the gap between students and faculty.
- **Research Assistant for SurfLab(C++, Python, and Git)** Gainesville, Florida
University of Florida *September 2022 - Present*
 - Helping build an application that allows surgeons to conduct the patient's surgery in a simulated environment to mitigate the chances of human error occurring during the real operation
 - Focused on transitioning our changes to the new version of the open-source physics engine it was built on top of and organizing the repository from changes of the new research assistants that I trained.
- **Electrical Engineering Team Co-Leader of Innogators(C/C++)** Gainesville, Florida
University of Florida *January 2022 - September 2023*
 - Pitched ideas in front of the business operations team and to other engineers
 - Created awareness of manufacturing and budget constraints.
 - Creating a virtual reality glove that interacts with the 3D environment using a Raspberry Pi and Mechanics