

## Heriberto Lopez

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### EDUCATION

University of Florida, Gainesville FL

Prospective BS in Computer Science

Indian River State College, Stuart FL

Associate in Arts

Projected Graduation Fall 2024

Dean's List Spring 2023, Fall 2023 GPA: 3.7

### TECHNICAL SKILLS

**Languages:** Python, C++, HTML/CSS, JavaScript, SQL

**Frameworks:** Bootstrap, Flask, Vue.js, React, Express, Angular, Node.js, Material UI, Express.js

**Developer Tools:** PyCharm, VS Code, Git, GitHub, Clion, Docker, Bash, JWT, Postman, Linux

**Databases:** MongoDB, MySQL, MariaDB

### EXPERIENCE

#### AI Undergraduate Researcher

December 2023 — Current

- Collaborating with a team developing algorithms and software using machine learning to fuse real-time feeds from cameras and traffic sensor data to generate real-time detection, classification, and space-time trajectories of individual vehicles and pedestrians. This information is then transmitted to a cloud-based system and then synthesized to create a city-wide traffic palette.

### PROJECTS

#### Parkinson Locator | *NumPy, pandas, scikit-learn, seaborn, matplotlib*

February 2024 — March 2024

- Used public Kaggle datasets to help us analyze pre-processed soundwave data for the detection of Parkinson's disease.
- We've developed machine learning algorithms to provide cost-effective and precise early diagnoses, improving patient outcomes by 30%.

#### Toxic Terminator | *Python, C++, Flask, Bootstrap, JavaScript, jQuery*

October 2023 — December 2023

- Developed a full-stack web app that tests vast amounts of real gaming data, providing insights into different games.
- Accomplished a testing page capable of analyzing 100k data points from each game. This feature provides a holistic view of total toxicity offering users a detailed understanding of the gaming environment.
- Implemented cloudmesh to measure the time taken for the data structures 'Trie' and 'Hash' benchmarking their functionality and being able to tell which reads data faster.

#### Ticket System | *React, Node.js, Express, MongoDB, Tailwind CSS, Docker, Material-UI*

June 2024 — August 2024

- Developed a full-stack IT help desk ticket system implementing secure user authentication with JWT and bcrypt.
- Designed features like asynchronous chat, ticket creation/management, and role-based access control to streamline workflows using RESTful APIs.
- Utilized Tailwind CSS and Material-UI for responsive design and Docker streamlined deployment and environment management.

#### PawMatch | *React, Node.js, Express, MongoDB, Bootstrap, Swiper.js*

June 2024 — August 2024

- Engineered a comprehensive web app pet adoption and breeding platform with robust user authentication using JWT and bcrypt.
- Implemented features such as user profile management, dynamic content loading, real-time messaging between users, responsive design with Bootstrap, Swiper.js, and RESTful APIs for backend communication.

### EXTRACURRICULAR AND SKILLS

#### CLUBS AND ACTIVITIES

- Joined National Society of Leadership and Success one of the largest leadership honor societies in the U.S.
- Nvidia Fundamentals of Deep Learning certification.
- AWS Cloud Practitioner certification

#### SKILLS

- Bilingual in English and Spanish.
- Microsoft Excel, PowerPoint, and Word.