

# PAULO DREFAHL

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## EDUCATION

### Florida Gulf Coast University (FGCU)

Fort Myers, FL

*Bachelor of Science in Software Engineering, Minor in Mathematics*

*Graduation: May 2025*

- GPA: 3.8 — FGCU Honors College student — Dean's List 2021-2024.
- College of Engineering Ambassador, Honors College mentor, Teaching and Research Assistant.
- Eagle Research Lab coordinator, Former Secretary of the Software Engineer Club.
- Awarded the merit-based LAC Scholarship, granting more than 100k over 4 years.

## EXPERIENCE

### Homeland Security Investigations (HSI)

Fort Myers, FL

*Software Engineer Intern*

*Aug 2023 – May 2024*

- Served as Fullstack Developer and Project Manager for Netspider, a tool to combat human trafficking.
- Led a team of 7 developers, implementing Agile, SDLC, DevOps practices. Part of FGCU Senior Project Internship
- Implemented technologies such as JavaScript, Python, ElectronJS, Flask, Pandas, HTML, CSS, Tailwind, etc.
- Recognized by [NBC](#) for contributing to 500 investigations, 84 search warrants, 37 arrests, and 63 victims saved.

### FGCU Whitaker College of Engineering

Estero, FL

*Junior Researcher*

*Aug 2023 – April 2024*

- Published 2+ research papers on Computer Networks, IoT Devices, Software Development.
- Mentored 8 students in computer science, networks, and IoT devices integration
- Presented research publications in Domenstic and International Conferences such as HCI, ASPIRE, etc.

### FGCU Whitaker College of Engineering

Estero, FL

*Teaching Assistant*

*Aug 2021 – May 2023*

- Led and mentored over 110 students in software development projects.
- Provided technical leadership and guided students in 2 course: Intro to Computer Science and Programing II
- Reviewed more than 200 coding assignments and conducted approximately 50 hours of office hours.

## PROJECTS

### PAT (Patent AI Technology) | *React, JavaScript, Python, Flask, LLMs, REST APIs, C++*

March 2024

- Fullstack web app designed to assist attorneys and legal professionals in the patent analysis process.
- Software powered by Large Language Models and Scikit-learn similarity algorithms.
- Awarded 2nd place in Eagle Hacks 2024 Hackathon.

### Netspider HSI | *Python, JavaScript, Selenium, Express, React, Java, Tailwind, MongoDB*

August 2023

- Fullstack Application developed to assist HSI investigators in combating human trafficking.
- Software Currently being used by Homeland Security Investigations.
- Recognized as the Best Internship Project at EagleX 2024.

## PUBLICATIONS

### UAV-Swarm-Aided Disaster Response Platform | *Assembly, Networks, IoT, Drones*

September 2024

- Led the development of algorithms to optimize UAV video transmission as part of a comprehensive Disaster Management Platform.
- Presented at the HCI International Conference 2024; (ISBN: 978-3-031-61060-8).
- Researched the potential of UAV swarms in enhancing disaster response efficiency and effectiveness.

## TECHNICAL SKILLS

- **Languages:** C/C++, Python, Java, JavaScript, Kotlin, Rust, Assembly, HTML/CSS.
- **Databases:** SQL, MongoDB, Amazon DynamoDB.
- **Frameworks:** Bootstrap, ElectronJS, Angular, React, Vue, Node.js, Flask, Tailwind, TensorFlow, PyTorch.
- **APIs:** RESTful APIs, GraphQL, OpenAPI.
- **Libraries:** Pandas, NumPy, Matplotlib, Scikit-learn, SFML, PyQt6.
- **DevOps:** CI/CD, Jenkins, Kubernetes.
- **Cloud Technologies:** AWS (EC2, S3, Lambda), Azure.