

# William Blake Crawford

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## EDUCATION

### University of Florida

Bachelor of Science in Computer Science

Bachelor of Science in Mathematics

Gainesville, Florida

Expected May 2026

GPA: 4.00/4.00

**Relevant Coursework:** Programming 1 & 2 (C++ & Python), Data Structures and Algorithms

## TECHNICAL SKILLS

**Languages:** C++, CSS, HTML, JavaScript, Lua, Python, TypeScript

**Tools and Frameworks:** AWS, Express.js, Flask, Firebase, Git, Leaflet.js, Node.js, Pandas, PyTorch, React.js

## PROJECTS

### Clarifina, ShellHacks 2024 Vanguard Winner

[crwfrd.github.io/#clarifina](https://crwfrd.github.io/#clarifina)

- A **React TypeScript** web app that simplifies terminology on user-uploaded financial documents.
- Stored PDFs in **AWS S3** buckets and recognized text/bounding boxes using **AWS Lambda** textract.
- Implemented prompts/calls through **Express.js** backend to OpenAI API to contextualize phrases.

### Gainesville Crime Heatmap

[crwfrd.github.io/#gainesville-crime](https://crwfrd.github.io/#gainesville-crime)

- A web app highlighting top crime locations and emergency help in Gainesville, tailored to user filters.
- Implemented the interactive map and user interface using **Flask**, **JavaScript**, **HTML/CSS**, and **Leaflet.js**.
- Created an algorithm to convert **210k crime points** to a latitude-longitude array paired with offense count.
- Sorted offense count array using heap/shell sort, simultaneously calculating distinct sort operation costs.

### Strange Showdown

[crwfrd.github.io/#strange-showdown](https://crwfrd.github.io/#strange-showdown)

- A free-for-all round-based fighting game made using **Roblox Studio** engine and **Lua** coding language.
- Wrote an **API** to manipulate a custom-made set of checks/values on each player model.
- Formulated game flow to run rounds, prompt GUI, incorporate new players, and update player datastore.

## EXPERIENCE

### University of Florida CISE

Gainesville, FL

Teacher Assistant, Programming Fundamentals 1

Jan. 2024 - May 2024

- Taught weekly sections with **50 students** about object-oriented programming, looping/branching, procedural/data abstraction, and program modularity through **Python**.
- Graded and identified algorithm errors in varying programming exams, projects, and homework.
- Prepared review material and presentations on programming fundamentals for **~500 students**.

## INVOLVEMENT

### Dream Team Engineering (DTE), UF QPSi AI Innovations

Gainesville, FL

Software Engineer, Clinical Agent-Based Machine Learning Model

Aug. 2024 - Present

- Developing a machine learning model leveraging **Temporal Graph Neural Networks (TGNN)** to create real-time clinical recommendations by analyzing patient characteristics and historical data.
- Building a robust data pipeline with **pandas** for data preprocessing, cleaning, and feature engineering.
- Integrating **PyTorch** to train the TGNN model, using time-series data to improve accuracy/performance.

### Freshman Leadership Engineering Group (FLEG)

Gainesville, FL

Collegiate Director

May 2024 - Present

- Leading **10 undergraduate students** in planning **monthly** events to promote student collegiate growth.
- Holding **bi-weekly** office hours to aid freshman engineers in their curricular decisions and pursuits.
- Working with a **20-member** executive team to make decisions on behalf of the entire organization.