# LAURENCE R. MULLEN

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## EDUCATION

**Bachelor of Science in Computer Science, Cum Laude**                                    **August 2018 - May 2022**
University of Florida, Gainesville, FL
- Minor in Environmental Science
- Cumulative GPA: 3.77/4.0
- Coursework: Design Patterns and OOP, Data Structures and Algorithms, Databases, Data Science, Networking, Operating Systems, Computer Security, Statistics, Numerical Analysis, and Performant Programming in Python

## TECHNICAL SKILLS

**Languages:** Python, C++, C, Java, JavaScript, HTML/CSS, SQL, Julia, R, MatLab, Bash
**Frameworks & Libraries:** React.js, Express.js, Flask, Qt, NumPy, SciPy, Scikit-learn
**Tools:** Git, Node.js, MongoDB, CMake, Docker, Ansible, Linux, WSL, Nginx, Postman, Visual Studio

## EXPERIENCE

**Contract Web Developer** | Worth Avenue Yachts, Ft. Lauderdale, FL                  **September 2022 - Present**
- Sole developer of a CRM system designed to optimize and assist yacht charter brokerage operations
- Proposed, designed, and implemented a full-stack web application using React.js, Flask, HTML/CSS, and SQL
- Implemented features to help manage client inquiries, optimize daily workflow, and assist with data analysis
- Significantly increased broker productivity and improved charter client retention in initial testing

**Freelance Web Developer** | Ft. Lauderdale, FL                          **August 2021 – September 2022**
- Developed modern static websites for clients in the yachting industry using HTML, CSS, and JavaScript
- Communicated frequently with clients to ensure that requirements and features were designed to satisfaction

## PROJECTS

**Self-taught "Homelab" DevOps Engineer** | Ubuntu, Raspbian, Python, Bash            **January 2019 – Present**
- Automatically set up environments using Ansible and deployed containerized applications with Docker
- Reverse-proxy network using Nginx, SSL/DNS supported by Cloudflare, and remotely linked storage with Gsuite
- Host websites, game servers, media, and more while ensuring optimal uptime and performance for users

**Symmetry Trap (Undergraduate Research)** | C++, Qt
- Developed a plugin for the UF BRIO lab to aid research on Automated Model-Image Registration of Kinematics
- Implemented using C++ with Qt and VTK for the GUI, and OpenCV, cuDNN, and libtorch toolkits
- Used linear algebra concepts to replace a brute force algorithm, reducing runtime by 98.5%
- Planned sprints and created high-quality UML diagrams, documentation, and presentations

**Activist Agenda** | React.js, Node.js, Express.js, MongoDB
- Collaborated in a team to develop a full-stack web application in support of the Black Lives Matter movement
- Built using the MERN stack and deployed on Heroku, and implemented email and geocoding APIs
- Gained experience using Agile methodology, creating documentation, and communicating with a client

**AlgoRythm** | Python
- Created a customizable real-time audio visualizer that dynamically changes based on the song and cover art
- Built using the PyGame GUI framework and PyAudio, NumPy, and SciPy for performant data processing
- Implemented Windows media and Spotify API integration, as well as various GUI elements
- Optimized code performance and readability using polymorphic OOP concepts for different visualizer styles