Aiden Thomas

321-831-6162 | thomas.aiden@starprograms.dev | gh: OnStarPrograms | linkedin: aiden-programs

Education

University of Florida Jan. 2027
Bachelor of Science in Computer Science, Minor in Teaching | GPA: 3.34 *Gainesville, FL*
Courses: Adveserial Cybercraft, Data Structures and Algorithms, Calculus 1, 2, 3

Technical Skills

Languages: Java, Python, C, C++, SQL (SQLite), JavaScript, HTML/CSS, Rust, Bash, Clojure
Frameworks: Wordpress, DJango, NodeJS
Developer Tools: Git, GDB, NeoVim, CMake, VS Code, Visual Studio, Command Line, Netbeans, Eclipse, Binary Ninja
Libraries: Pandas, NumPy, Matplotlib, OS, x11, Sfml, Sqlite3
Clubs: Technology Student Association (President), Network Security Club, UF Cyber-security Team, Open Source Club, Rock Climbing Club

Experience

Undergraduate Teaching Assistant | *Advanced Programming, Programming 2* June 2024 – Present
University of Florida | *Gainesville, FL*

- Fostered upcoming computer engineering students with deep understanding of data structures
- Demonstrated exceptional mastery of course material through in-depth application with 20% faster debugging
- Led engaging discussions on core programming concepts with 98% attendance

Projects

Course Redesign (Advanced Programming) | *C, C++, Data Structures* Nov. 2024

- Collaborated with others to enhance Advanced Programming, with a hitch in difficulty by 40%
- Defined clear learning objectives for beginner and advanced programmers to enhance 100+ students
- Led multiple projects such as Giga-Nano, Seam Carving algorithms, and others to foster student engagement

Seam Carving Algorithm | *C, C++, File IO, Dynamic Programming* Nov. 2024

- Utilizing Kernel based energy weighing to dynamically take the best seam on an image
- Reduces an image to 40% original size while still containing proper image ratios
- Promotes an easy-to-use interface using only image input and cut down size to achieve optimal output

Giga-Nano | *C, C++, System Hooks, Command Line* Aug. 2024

- Designed and implemented industry standard CLI text editor "Nano" with 15+ "Vi" based keybindings
- Utilized native system calls and multi-threading to capture key input.
- Enhanced Stack based commands using Trees with separate stacks within nodes to allow for 15+ searchable buffers

Networking | *Networks, Filius, Simulation, Java* July 2024

- Constructed a simulated world wide web system with 0% data loss
- Operated Mailing services, DHCP servers, and HTTP requests with 30 simulated devices
- Managed and maintained a simulated cascading network failure with a 24% network loss

Static Chess Engine | *C#, Chess, Windows API, Statistics* Jan. 2024

- Assembled static evaluation chess engine within 500 lines
- Utilized possible moves with predicted enemy moves to run risk analysis algorithms
- Derived from the Minmax AI algorithm with recursion

Windows Exploitation w/ Networking | *C, C++, Python, Windows API, Sockets, TCP, Arduino* Nov. 2023

- Routed 3DS network communication with real time access to the host computers peripherals
- Developed using TCP connection with data compression to reduce overhead by 300 bytes
- Bypasses kernel level anti-cheat within Valorant 100% of the time