

John Wesley Caldwell

[LinkedIn](#)

TECHNICAL SKILLS

Languages: Python, CSS, C++, C#, HTML, JavaScript, SQL

WORK EXPERIENCE

Aug 2021-Jan 2023 IT Technician (NC)

- Contacted by clients and diagnosed issues of the software or hardware through clarifying questions and evaluation of the given error(s).
- Troubleshooted connection issues between computing devices and outputting hardware (e.g., scanners, printers, etc.).

Aug 2020-May 2021 North Carolina State University & USDA – Systems Engineering (NC)

- Constructed a detection system in Python that would distinguish and locate weeds from crops on a tested field and apply a spray onto the location to destroy the weed.
- Built the round-robin scheduler of the brain of the system to ensure its order of operations in Linux.
- Established the connection between the peripherals of the full system using Python.
- Created the algorithm that would translate the coordinates of the image detection to the machine's movement.

May 2018-Jul 2019 Norfolk State University: Center of Excellence – Cyber Security Intern (VA)

Year 1 - Software Engineering:

- Constructed the backend database using SQLite and C# for an informative and demonstrative repository application made for cyber forensic analysts.
- Programmed parts of the frontend software written in C# for the windows application using Microsoft Visual Studio.

Year 2 - Cyber Security Research:

- Researched the accuracy of keystroke patterns as a biometric authentication system by comparing testers' timing patterns using machine learning.
- Built experimental Python algorithms to test our hypotheses using TensorFlow and Scikit-Learn libraries.
- Determined that the random forest algorithm was 29% more accurate than the next machine learning algorithm, especially when users type a common phrase instead of a strong password.
- Published the final research paper at the IEEE conference in October 2019.

PROJECTS

Jan 2023-May 2023 Web Application for Art Portfolio – [Website Link](#)

- Designed an interactive SPA website using React.js, JavaScript, and HTML to illustrate my hobbies in digital art design and music covers.
- Developed a responsive design in CSS that works both for mobile and computer devices.
- All code of the website is found on my GitHub repository linked at the bottom of the website.

EDUCATION

Aug 2018-Jun 2021 North Carolina State University (NC) Degree: B.S Computer Engineering **GPA:** 3.0/4.0

Aug 2015-Jun 2021 Fayetteville State University (NC) Degree: B.S Computer Science **GPA:** 3.9/4.0