Jonathan Hickey

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Current Computer Science Major with background in Cyber Security, Automation, Python and Shell Scripting, interested in Network Security.

TECHNICAL SKILLS

****Eligible for Clearance****
Programming Languages: Java, C/C++, Unix/Linux, Python, Ruby (Basic), PowerShell and Bash
Tools: Git, Virtual Machines
Deployment: Docker, Kubernetes, AWS Hosting
App Development: Django, Node.js, React, Spring Boot
Front End: React, Tailwind CSS, Angular
Networks: Maintaining and Configuration of Network Hardware
Concepts: Object-Oriented Programming, Complex Data Structures, Functional Programming, Development Lifecycle, Big Data and Data Visualization, MVT Architecture, Test-Driven-Development
Team Development Management: Scrum Project Management, Agile Development
Professional Skills: Technical Writing and Documentation, Team Leadership
Notable Coursework: Software Engineering, Computer Networks

EDUCATION

University of Colorado – Colorado Springs (UCCS), Expected Graduation: 05-2025
Bachelor of Science in Computer Science (Cybersecurity), ABET Accreditation

- Chancellor's Award Scholarship
- National Honor Society Member
- Association for Computing Machinery Club Member and Officer
- National Cyber League Member/Participant
- GPA 3.615

RELEVANT SOFTWARE DEVELOPMENT EXPERIENCE

Work Experience

Garmin International – Garmin Pay Colorado Springs, CO
Software Engineering Intern *May 2024 – Aug. 2024*

- Developed Java SDK in Spring to allow for banking apps to let user is add card details straight from their app into the Garmin Pay wallet.
- Created a microservice to simulate banking issuer that tested the Java SDK's
- Initialized and deployed services onto Kubernetes clusters through AWS.
- Created functionality within the team's Android testing app to all for requests to be made using the microservice/SDK alongside receiving and handling responses sent back from the internal platform.

Yoga Alliance Colorado Springs, CO
Data Analytics and Software Development Intern *Aug. 2023 – Dec. 2023*

- Conducting data analytics on a wide variety of mental health data.
- Development of custom data analytics program in Python.
    - Bridges compatibility with both SAS and R.

UCCS Department of Computer Science Colorado Springs, CO
Teaching Assistant *Jan. 2023 – May 2023*

- Provided aid to professors in both lectures and assignment grading covering complex Computer Science topics.
- Requires advanced mastery towards topics being taught.

Projects

Legiscape.us Web App *Aug. 2024 – Present*
Largescale is a JavaScript built political app that allows for US citizens to get free access to information on the politician's that represent them, not only on a federal and state level, but also at a local level.

- Built the app using the Bun framework and Hono for efficient server-side processing and API integrations.
- Utilized React to create a comprehensive front-end design

- Integrated multiple APIs, including geolocation-based services, to map user addresses to corresponding political districts.
- Incorporated Python scripts utilized for custom data analysis on sourced data to provide in-depth looks at various points surrounding a politician's work.

Data Analytical Software *Aug. 2023 – Dec. 2023*

Custom Data Analytics software developed in Python to quickly run custom analytical processes designed by the client.

- Seamless integration with various known tools such as R and SAS.
- Custom built programs deployed for automatic data retrieval and cleaning as soon as user's finish surveys.
- Custom built API framework and security used to store and retrieve analytical and company data.

Team Inventory Web App *Sep. 2023 – Jan. 2024*

Web App developed with Django to track inventory of computer parts/systems with ability to read Excel files into database.

- Utilizes Model-View-Template (MVT) architecture to implement interaction to a API from user interface through Python
- Complex UI utilized by custom HTML and Bootstrap templates.
- Developed implementing Scrum Coaching and Agile Development techniques in a team environment.

UDP Client – Server Simulation with Go Back-N Protocol *Sep. 2023 – Oct. 2023*

Developed a User Datagram Protocol (UDP) client – server communication which passes files between the server and client implementing a Go Back-N Protocol for flow-control.

- Applies sequence numbers and sliding windows to variables to maintain order and speed packets are sent between server and client.
- Adding handling for acknowledgements server-side which contains the expected sequence number helping the client to determine which packets to send next.
- Any out-of-order packets are handled by the server checking the sequence number of the incoming packets and writing the data to the file only if the packet's sequence number matches the expected sequence.

Custom Frogger Style Game within C++ *Mar. 2023- May 2023*

- Utilized advanced class inheritance and C++ polymorphism behavior to structure functioning objects with auto-moving capabilities.
- Incorporated N-Curses to enhance proper syncing and refresh rate for both game objects and player movement.

Bike Race Registration Program Simulation *Aug. 2023- Dec. 2023*

Simulated public bike race registration software including various modes for both participants and administration.

- Demonstrates advanced uses of abstract memory by encompassing large class-based objects into self-calling pointer nodes to set up a pointer-based linked list.
- Password management and storage for administrative accounts
- Utilized symmetric-key algorithm to encrypt passwords created by Admins.