Ethan Tompkins

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EDUCATION

Clemson University   Clemson University | August 2019 - December 2022
- Bachelors of Science **Computer Science**
- **Relevant Coursework**: Machine Learning, Artificial Intelligence, Software Engineering, Distributed Systems, Computer Systems, Network Systems, Database Management Systems, Data Structures and Algorithms

WORK EXPERIENCE

Itron, *Software Engineer*   Oconee, SC | December 2022 - Current
- Developed and maintained **C# and C++** GUI applications for testing circuit boards and residential gas meters in a high volume manufacturing environment.
- Created an automated soldering application in **Python** using Raspberry Pi platform that included features for process control, efficient data recording, and a user-friendly interface. Ongoing development saw the implementation of component tracking, battery testing, and automated clamping for stability during soldering tasks.
- Designed and implemented **SQL** tables, views, and triggers, enhancing data storage and retrieval across multiple stations.
- Continuous improvement of quality, cycle time, and reliability of production equipment through software modifications using **Azure DevOps** and **git**.

Boeing, *Software Engineer Intern*   Virtual Internship | August 2022 - December 2022
- Created and programmed a hardware device using **Python** to maintain temperature for Cold Storage Volume in parallel with Boing's existing development.
- Integrated a microcontroller with a temperature sensor and compressor to meet temperature specifications within a controlled environment.
- Developed a custom web interface utilizing **JavaScript and Node.js** to remotely control and monitor hardware devices, improving accessibility and ease of use.

Knack Works, *Software Engineer Intern*   Chantilly, VA | May 2022 - August 2022
- Developed a web application using **Vue.js**, **React**, and **Apollo GraphQL** that acted as a Kubernetes visualization tool.
- Extracted data from the **Kubernetes** API (crafted in **Go**) and effectively restructured it into a custom **REST API**, optimizing application performance and functionality.
- Wrote comprehensive unit and feature tests using **Python Cucumber** and **Gherkin**, significantly reducing bugs and enhancing system stability.

Clemson University, *Software Developer - Machine Learning*   Clemson, SC | December 2021 - December 2022
- Conducted in-depth analysis of ColorNet, a patented machine learning solution developed with **PyTorch** for real-time targeted color correction in live video feeds.
- Researched various machine learning methods, such as convolutional neural networks and transfer learning, to optimize real-time video processing, increasing processing speed over 80% to reach 30 FPS.
- Developed novel algorithms, tested them on large-scale datasets, and produced research papers accepted by the Technical Association of the Graphic Arts (TAGA).

SKILLS

- **Languages**: Python, C#, Javascript, C++, Rust, React, SQL
- **Frameworks/Technologies:** Vue, React, Node.js, Express.js, .NET, ASP.net, Postman, MongoDB