

Aaron Paterson

Software Engineer

github.com/MayCXC

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WORK EXPERIENCE

- **Zonos** zonos.com
Software Engineer
 - Informing online shoppers on duty & tax costs with international shipment APIs
 - Upgrading REST endpoints with GraphQL and Spring Boot via DGS
 - Collaborating with Agile Methodologies and VCS using Scrum and Git*Since 2022 · DGS, GraphQL, Spring Boot, Docker, Postgres, Jira, Confluence*
- **Picnic Score** picnicscore.com
Full-Stack Developer
 - Created API services that automated content detection and deletion from multiple online sources
 - Leveraged the Google Cloud Platform and demonstrated its applications to live audiences
 - Maintained code through extensive refactors, using version control, CI/CD, and unit tests to streamline tedious processes*Summer 2021 · Node.js, MongoDB, Python, Kubernetes, Terraform, Go*
- **Flamig Farm** flamigfarm.com
Web Developer
 - Designed and published a "Sponsor an Animal" page for an existing WordPress website in response to loss of business during Covid-19
 - Automated the creation of separate mailing lists, a personalized thank you message, and gift links
 - Provided weekly in-person training*Summer 2020 · WooCommerce, VisualComposer, Auto-Hotkey, ECMAScript, PHP, CSS*
- **Complexity Rooms** git.io/fjnht
Electronic Technician
 - Designed, fabricated, programmed, installed, and documented four Arduino-based escape room puzzles
 - Estimated and adjusted budgets and deadlines
 - Implemented hardware including protoboards, digital LED strips, RFID, Hall Effect, and Piezo sensors*Summer 2019 · C++, Arduino.h, FastLED*

STUDENT EXPERIENCE

- **IoT Independent Study** git.io/Jtxbz
 - Designed and programmed a Bluetooth Low Energy presence detection meshnet on the ESP32 platform
 - Collaborated with other independent study members to separately design compatible 3D printed hardware and a database REST API*Winter 2021 · esp-mdf, Plug.Cowboy, Eclipse Paho*
- **FIRST Robotics** git.io/JLkYr
 - Lead a programming team of Simsbury High School students using a command-based API to learn and implement best practices
 - Coordinated with mentors and several specialized teams to set and meet budgets and deadlines*Winter 2018 · Java 8, WPILib, GRIP*

RESEARCH EXPERIENCE

Python, NumPy, pandas, Colab, Matplotlib

- **Tennessee Tech NSF REU** git.io/JzmZB
 - Assisted graduate and PhD researchers in applying machine learning models to electricity theft detection
 - Presented progress and results on a weekly basis*Summer 2021 · Keras, Adversarial Robustness Toolbox*
- **DIPC Physics Project** git.io/JEbDV
 - Queried an atomic simulation database of 2D materials to identify broken gap heterojunctions in crystal bilayers by applying density functional theory
 - Created interactive visualizations to aid in the design and analysis of Van der Waals heterostructures*Winter 2021 · Computational 2D Materials Database, Atomic Simulation Environment, Quantum ESPRESSO*

COMPETITION EXPERIENCE

- **Dyalog APL Competition** git.io/JzmZ3
 - Placed third in phase II*Winter 2021 · Dyalog APL*
- **IBM Master the Mainframe** ... git.io/JOHCB
 - North American Regional Winner*Winter 2021 · JCL, Enterprise COBOL, REXX, TSO, Docker, Ansible*
- **College Tech Challenge** git.io/fpZTb
 - Placed first with two other Quinnipiac students*Winter 2019 · GitHub, VSCode Live Share, Vue.js, DigitalOcean, Heroku*