# **Aaron Paterson**

Compsci Undergrad

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### **WORK EXPERIENCE**

- Picnic Score ...... picnicscore.com
  Backend Developer
  - Created API services that automated content detection and deletion from multiple online sources
  - Adhered to agile methodologies by way of Scrum to maximize productivity while working remotely
  - Leveraged the Google Cloud Platform and demonstrated its applications to live audiences
  - Maintained code through extensive refactors, using version control, continuous integration/deployment, and unit tests to streamline tedious processes Summer 2021 · Node.js, MongoDB, Python, Kubernetes, Docker, Terraform, Go, Jira, Confluence
- 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 in response to faulty parts and changes in time constraints
  - Implemented hardware including protoboards, digital LED strips, and RFID/Hall Effect/Piezo sensors Summer 2019 · C++, Arduino.h, FastLED

## **EDUCATION**

• B.Sc. Computer Science and Mathematics Quinnipiac University

3.3 CGPA / 3.7 in-major GPA

Class of 2022 · Quinnipiac Computing Club, Student Advisory Board, Slackline Club

## 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 ESSPRESSO

## **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