Aaron Paterson **Compsci Undergrad**

github.com/mayhd3

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WORK EXPERIENCE

- **Picnic Score** ..... picnicscore.com
  Backend Developer
  • Improved and created API services to supplement a mature data pipeline

  • Automated content detection and deletion from multiple online sources

  • Maintained code through extensive refactors and deprecations, making heavy use of version control and unit tests to simplify tedious processes
  Summer 2021 · Node.js, MongoDB, Python, Google Cloud Platform, Kubernetes, Docker, Terraform, and 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 creation of separate mailing lists for the sponsors of each animal, a personalized thank you message, and a gift link feature

  • Provided weekly in-person training
  Summer 2020 · WooCommerce, VisualComposer, AutoHotkey, ECMAScript, PHP, and 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 IoT hardware including RFID readers, Hall Effect sensors, Piezo pickups, boost/buck converters, RS232 transceivers, and digital LED strips
  Summer 2019 · C++, Arduino.h, and 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, and 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, and GRIP

RESEARCH EXPERIENCE

Python, NumPy, pandas, Colab, and Matplotlib

- **TNTech 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 atomically thin crystal bilayers to identify broken gap heterojunctions predicted by 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, and Ansible

- **College Tech Challenge** ..... git.io/fpZTb
  • Placed first with two other Quinnipiac students
  Winter 2019 · GitHub, VSCode Live Share, Vue.js, DigitalOcean, and Heroku