# Aaron Paterson Software Engineer

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# WORK EXPERIENCE

- Zonos ..... zonos.com Software Engineer
  - Building APIs to inform international shoppers with duty + tax cost and shipment rating calculations
  - Unifying disparate REST endpoints with Spring Boot and GraphQL/Apollo Federation v2
  - Collaborating with Agile Methodologies and VCS using Scrum and GitHub

Since Jan. 2022 · Java 21+, Spring Boot, GraphQL, Gradle, PostgreSQL, Kafka, Redis, Terraform, AWS (ECR/ECS)

- Picnic Score ...... picnicscore.com Software Engineer
  - 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, making heavy use of version control, CI/CD automation, and unit tests to maintain code stability

Mar. 2021 - Dec. 2021 · Python, Go, Node.js, Typescript, MongoDB, GCP (Cloud Run, Pub/Sub)

- Flamig Farm .............flamigfarm.com Web Developer
  - Designed and published a "Sponsor an Animal" section for an existing WordPress homepage
  - Automated the creation of mailing lists, a personalized thank you message, and gift links for customers May 2020 - Feb. 2021 · PHP, WooCommerce, AutoHotkey
- 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 May 2019 - Apr. 2020 · C++, Arduino.h, FastLED

#### **EDUCATION**

Utah Tech University ..... utahtech.edu B.Sc. Computer Science *Jan.* 2022 - May 2024

## 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 study members to design 3D printed hardware and a database REST API 2021 · esp-mdf, Plug.Cowboy, Eclipse Paho
- VEX Robotics.....vistautah.com
  - Volunteering as judge and mentor for teams in the Vista robotics and Utah Tech University programs Since 2022 · Python, C++, VEXCode
- FIRST Robotics ..... git.io/JLkYr
  - Lead a programming subteam of Simsbury High School students to implement robot behaviors
  - Used a command-based API to simplify concurrency 2018 · Java 8+, WPILib, GRIP

### RESEARCH EXPERIENCE

- Tennessee Tech NSF REU.....git.io/JzmZB
  - · Assisted graduate and PhD researchers in applying machine learning models to electricity theft detection
  - Generated diagrams for an advisor's PhD thesis
  - Presented progress and results on a weekly basis 2021 · Python, 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 with application of density functional theory
  - Created interactive visualizations to aid in the design and analysis of Van der Waals heterostructures 2021 · Python, Computational 2D Materials Database, Atomic Simulation Environment, Quantum ESSPRESSO

## COMPETITION EXPERIENCE

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