

# Aaron Giroux

## Software Engineer

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## EXPERIENCE

### BlueCat Networks

Sept. 2021 - Sept. 2024

#### Software Engineer

- Designed and implemented health telemetry features using Vector and Prometheus to track DNS/DHCP activity and provide real-time operational statistics (Java, C++)
- Updated and refactored API endpoints to adhere to REST principles, reducing technical debt and improving consistency across services (Java)
- Developed and maintained comprehensive system and unit tests to ensure code quality for new features, while monitoring and updating existing tests in the CI pipeline to maintain stability and reliability
- Worked with the QA team to identify and resolve defects across the product
- Prepared and presented technical demos to engineering and product management teams, communicating feature functionality, implementation details, and project progress

### CoroSolar

Jul. 2020 - Sept. 2021

#### Software Engineer

- Communicated with clients to design and develop new features for a GUI application to display real-time information from solar trackers (Python)
- Diagnosed and resolve issues in the TechTrackDistributed software to drastically reduce the downtime of on-site solar trackers (C++)
- Developed code to communicate commands between solar trackers and master controllers over a Zigbee network using Modbus TCP protocol (Python)
- Provided documentation on existing codebases to owners and clients

### U.S. Geological Survey

Feb. 2019 - Mar. 2020

#### Software Developer

- Made significant contributions to open source software ISIS and ALE used widely in the planetary science community (C++, Python)
- Worked on enhancing continuous integration in ISIS3 using Jenkins CI
- Created Jupyter notebooks to test and troubleshoot the accuracy of various interpolation implementations (Python)
- Optimized unit and application tests to vastly reduce the size of the test data shipped with the software (C++, GTest)
- Worked with onsite scientists to gather acceptance criteria and requirements to implement new feature additions and bug fixes (C++)

## EDUCATION

### Northern Arizona University

May 2020

#### Bachelor of Science in Computer Science

- Minor in Mathematics
- Magna Cum Laude with a GPA of 3.86/4.0

## SKILLS

**Languages / Frameworks:** Java, C++, Python, Javascript, Typescript, Node, React, C

**Databases / Tools:** PostgreSQL, Vector, Prometheus, OpenGL, WebGL, Jenkins, Git, Nginx

**Software Development:** Agile Methodologies, Test Driven Development, Continuous Integration, Object-Oriented Programming

## PROJECTS

**Aaronislonely.com (2024):** Portfolio website to showcase drawings, paintings, photography and 3D modelling (React, PostgreSQL, Nginx, THREE.js)

**Mudflood (2024):** Point-and-click tile-based movement game engine for web browsers written from scratch (React, nginx, THREE.js, typescript, python)