

JOSEPH PETITTI

<https://petitti.org> · <https://github.com/jojonium>

Email : joseph@petitti.org

Phone : (518) 545-1984

EDUCATION

Worcester Polytechnic Institute (WPI)

Worcester, MA

- *M.S. Computer Science*
- *B.S. Computer Science*

May 2021

May 2020

SKILLS

- Kubernetes, Istio, RKE2/K3S, FluxCD, Helm, AWS, Fluent Bit, Coder, Authservice, Svelte, Git
- JavaScript/TypeScript, Java, Kotlin, C, HTML/CSS, Python, L^AT_EX, Bash, Haskell

EXPERIENCE

• Solid State Scientific Corporation

Nashua, NH

Jun 2021–Present

• Bio-CS Bridge Project, WPI

Worcester, MA

Oct 2019–May 2021

Full Stack Web Developer

- **Front-End Visualization:** Designed Angular front-end data visualization tools for historical corpus of ecology observations for NSF-funded educational ecology project.
- **Curriculum API:** Designed and implemented Node.js API for managing lesson plan metadata and files.
- **Data Analysis:** Wrote Python flask API scripts for performing data analysis for ecology hypotheses.

• ASSISTments

Worcester, MA

Jun–Aug 2020

Systems Engineer Intern

- **AWS Migration:** Migrated web application used by thousands of students and teachers from on-premises hardware to secure AWS cloud, involving PostgreSQL, Java, Vue.js, and Python on Amazon RDS and EC2.

• Wakefly, Inc.

Marlborough, MA

May–Jul 2019

IT Hosting Intern

- **Hosting Team:** Managed installing, updating, and troubleshooting virtual Windows and GNU/Linux servers hosting Kentico, Umbraco, WordPress, etc. content management systems and databases for dozens of clients.

• MAPFRE Insurance

Webster, MA

May–Aug 2018

Application Services Intern

PROJECTS

• Appjudicator

Worcester, MA

Master's Thesis

Aug 2020–May 2021

- **Android Host-Based SDN:** Designed and implemented a novel host-based software-defined networking (SDN) system for Android. The application combines local UI interaction monitoring with SDN policies for centralized anomaly detection and policy enforcement.

• Afterlight Caves

Worcester, MA

Personal Project—<https://afterlightcaves.com>

Nov 2019–Mar 2020

- **Procedurally Generated Web Game:** Designed and built performant, procedurally generated top-down shooter game for the web with two other students. All engine code, game logic, and graphics were made from scratch using only JavaScript. Selected by WPI to be demonstrated at PAX East 2020.

• Augmented Reality Tour Guide App

Kyoto, Japan

Kyoto VR

Jul–Oct 2019

- **Audio Tour App:** Developed mobile app in team of three for delivering audio tours with augmented reality features for historic sites in Kyoto, Japan.

- **Tour Editor Web App:** Designed and deployed web application for creating and version-managing extensible location-based audio tours including vanilla JavaScript front-end and Node.js back-end.

• Cultural Preservation and Promotion

Central, Hong Kong

Institute for Sustainable Urbanisation

Jan–Mar 2019

CERTIFICATIONS

- CompTIA Security+
- AWS Certified Solutions Architect — Associate

Aug 2021

Jun 2021