JOSEPH PETITTI

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EDUCATION

Worcester Polytechnic Institute (WPI) — Worcester, MA
- *M.S. Computer Science* — *May 2021*
- *B.S. Computer Science* — *May 2020*

SKILLS

- Kubernetes, Istio, RKE2/K3S, FluxCD, Helm, AWS, Fluent Bit, Coder, Authservice, Svelte, Git

- JavaScript/TypeScript, Java, Kotlin, Bash, Python, HTML/CSS, C, LaTeX, Haskell

EXPERIENCE

Solid State Scientific Corporation — Nashua, NH
Software Engineer — *Jun 2021–Present*
- **Kubernetes Infrastructure**: Deployed and operated multi-tenant Kubernetes platform for development and production data processing.
- **DevSecOps PaaS**: Provided modern CI/CD, platform to tenant developer teams.
- **Public Sector Client**: Met strict DoD requirements for operating in government cloud environment.

Bio-CS Bridge Project, WPI — Worcester, MA
Full Stack Web Developer — *Oct 2019–May 2021*
- **Front-End Visualization**: Designed Angular front-end data visualization tools for historical corpus of ecology observations for NSF-funded educational ecology project.

ASSISTments — Worcester, MA
Systems Engineer Intern — *Jun–Aug 2020*
- **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
IT Hosting Intern — *May–Jul 2019*
- **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
Application Services Intern — *May–Aug 2018*

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+ — *Aug 2021*
- AWS Certified Solutions Architect — Associate — *Jun 2021*