

David Solinsky

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Career profile: Detail-oriented Software Engineer with experience in developing web applications and secure data processing systems. Proficient in integrating SQL databases, creating CRUD functions, and utilizing FastAPI for real-time data exchange. Adept at containerization using Docker and implementing agile methodologies. Passionate about using game engines for data visualization and building customer-facing interactive experiences.

PROFESSIONAL EXPERIENCE

GEOST, Reston, VA

April 2023 – August 2024

Software Engineer, Mission Systems

Developed satellite payload test software for payload data packet classification to control payload peripherals and retrieve telemetry

- Developed payload test software in C to control satellite camera payload via user command data packets.
- Built custom data packet for telemetry for differentiating general telemetry from specific transmissions.

Developed a secure data processing system for payload classification, ensuring proper segregation and transmission of unclassified and classified data

- Set up Docker for database services and secure data transmission, streamlining service interactions.
- Developed FastAPI endpoints with Pydantic/SQLAlchemy for efficient, secure data processing.
- Implemented unit tests and agile practices for reliable code and project management.
- Wrote a logging service on a separate thread in C for unifying and optimizing messages.

Led the development of a web application integrating the AstroUXDS design library with CesiumJS, enabling interactive 3D visualization of space objects

- Integrated PostgreSQL for dynamic 3D visualization and interaction with space object data.
- Developed CRUD functions with SQLAlchemy and Pydantic for efficient UI and backend operations.
- Implemented UI features like filters, pagination, and toggles to enhance interaction in Typescript and CesiumJS.
- Built FastAPI-based APIs for real-time data exchange between frontend and database.
- Collaborated with analysts and engineers nationwide to develop space-based software solutions.
- Created Dockerized PyTest integration tests to ensure accurate data transmission between payload and ground systems.

Raytheon Technologies, Silver Spring, MD

August 2022 – April 2023

Software Engineer (Subcontracted by ISYS Technologies)

Maintained critical software for the Raytheon AWIPS contract with the National Weather Service, resolving weather forecast configuration issues affecting warnings.

- Collaborated in Scrum stand-ups and resolved debug tickets using Kanban boards via Remedy and Redmine.
- Investigated problems in Java, Python and XML files on RHEL/CentOS to remedy user configuration issues.

RELEVANT PROJECTS

Witch Hunt

May 2024 - Present

Lead Software Developer and Artist

- Creating art in Clip Studio Paint EX, 3D models of characters in Blender, and props for use in-game
- Developing shaders and gameplay systems in Godot, C++, Rust, GDShader, and GDScript (formerly in Unity with C#) to optimize performance and the gameplay experience.

Up in the Air

October 2021 – Present

Lead Software Developer and Artist

- Creating art in Clip Studio Paint EX, 3D models of characters in Blender, and props for use in-game
- Developing gameplay features and systems in Godot, C++, Rust, and GDScript (formerly in Unity with C#) to optimize performance and the gameplay experience.
- Creating a dynamic dialogue sequencer and all game entity states with Flecs, a C/C++ ECS Framework

EDUCATION

College of William and Mary

Bachelor of Science in Computer Science

Honors: Dean's List: *Fall 2020 - Spring 2021*

Williamsburg, VA

2022

TECHNICAL SKILLS

- **Programming Languages:** C/C#/C++, Python, Java, HTML/CSS/JavaScript(ReactJS, Svelte), Rust
- **Markup Languages:** LaTeX, JSON, CSV, XML
- **Databases:** SQL (MySQL, SQLite, PostgreSQL)
- **DevOps:** Git/Github/Gitlab, Bitbucket/Jira/Confluence, Selenium, Jenkins/SonarQube
- **Editors:** Vim, VSCode, Visual Studio, Eclipse, Rider, Clion, Android Studio
- **Game Engine/3D:** Godot, Unity, Blender
- **Server Operating Systems:** Windows (WSL), MacOS, Linux (Ubuntu, Mint, Manjaro, CentOS, RHEL)