

SANTIAGO MOLINER PREJANO

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Experienced software engineer specializing in C++, passionate about aviation and simulation, seeking to apply my expertise to impactful, challenging projects. I am committed to continuous learning in new technologies and further developing my interpersonal skills

Professional Experience

Bertrandt (AIRBUS Defence & Space)

Madrid, Spain Sep 2023 –Present

Simulation Engineer

- Developed the real-time sensor model simulation for gimbal control and entity tracking within the SERPAS project, integrating it with other simulation models and connecting it to an image generator via the CIGI protocol, within a distributed simulation environment.
- Worked with various Image Generator solutions adhering to the CIGI standard, including GenesisIG (Diamond Visionics), VBS Blue IG (Bohemia Interactive), and Aechelon.
- Gained deep understanding of the SERPAS project and its technical components and performed several technical showcases and demonstrations.
- Designed comprehensive unit tests for the sensor model simulation to ensure reliability and performance, validating both accuracy and seamless integration with real-time data streams.
- Developed a gateway for the Airbus software communication framework (SEN), enabling translation between simulation protocols such as DIS and CIGI with minimal latency.
- Built a data converter tool for SEN that transforms federation object models into serialized data required for tactical visualizations in Tacview with their custom proprietary protocol.
- Coordinated with Bohemia Interactive Simulations for a project to convert our Spanish terrain Genesis database into CDB (Common Data Base) format, with biweekly meetings to check on new advancements.

Fortra

Barcelona, Spain Mar 2022 – Sep 2023

Software Engineer

- Developed and maintained a custom penetration testing tool (Core Impact) primarily in C++ and Python.
- Maintained and enhanced the open-source Impacket library, managing pull requests and adding new features.
- Developed a Python-based NTLM relay attack with Impacket to intercept and relay NTLMv2 hashes over SMB, integrating Mimikatz for efficient offline password extraction within Active Directory environments.
- Conducted targeted attacks on vulnerable hosts using Kali Linux, gaining hands-on insight into system vulnerabilities and exploitation techniques.

Discoverfy

Barcelona, Spain Nov 2021 – Mar 2022

Fullstack data developer

- Integrated a module to optimize the eCommerce customer journey in the Shopify environment to increase sales, and capture real-time product and customer data for actionable insights.
- Developed a machine learning algorithm in Python within AWS Lambda to deliver enhanced, real-time product recommendations based on previously liked products and their relationship between them.

Education

Universidad Polit cnica de Catalu a (UPC)

Barcelona, Spain 2019 - 2022

Bachelor's degree in video game development

- **Specializations:** Advanced graphics programming, AR/VR, Networking

Technical Skills

Programming languages: C++, C, Bash, Python, GO, Rust

Technologies and tools: Linux, Git, Docker, CMake, Conan, Nomad, Protocol Buffers, CIGI, DIS