

# CARLOS SERRANO GUTIÉRREZ

Software Engineer



## Links

- Github
- Linkedn

## Languages

- Spanish (Native)
- English (C1)

## Certificates

- 2024 Attendance Red Hat OpenShift Administration I: Operating a Production Cluster (DO180)
- 2022 Cambridge Advance Certificate CAE

## EDUCATION

### Software Engineering, Complutense University of Madrid (Bachelor's Degree)

Madrid, Spain      Sept 2021 – Expected: Jun 2025

### Erasmus in Software Engineering, Algebra University (Bachelor and Master Level)

Zagreb, Croatia      Sept 2023 – Jul 2024

## WORK EXPERIENCE

### Business Security Solutions Intern at PwC

Jan 2025 – Jun 2025

Design of cybersecurity architectures, security audits , vulnerability management, security in the software development life cycle

## SKILLS

- Critical thinking and innovation
- Communication and interpersonal skills
- Software design
- SCRUM methodology and iterative processes
- Project management and leadership
- Responsibility and professional adherence
- Continuous improvement

## COMPETENCES

Programming Languages:	Java, Kotlin, C++, C, C#, SQL, Python, React Native
Frameworks:	Spring Boot, ASP.NET, WPF, Next.js
Tools:	OWASP ZAP, SonarLint, jBPM, MuleESB
Platforms:	Docker, Podman, OpenShift, Microsoft Azure, ActiveMQ

## PROJECTS

### CryptographicChat (2025)

This project addresses the need for a secure, end-to-end system where only users involved in a conversation can access the content of their chats. Neither the server nor potential attackers can decipher the communication. The objective is to uphold the five pillars of CIANA, as defined by NIST: Confidentiality, Integrity, Availability, Authentication, and Non-repudiation.

### Secure and Interoperable Insurance Application (2024)

The project involved developing an Insurance Application, integrating a Spring Boot backend and JavaFX and React Native frontends. Security measures like OWASP ZAP and Sonar Lint scans were implemented to prevent vulnerabilities. JWT was utilized for secure and efficient user authentication and interoperability was enhanced using Mule ESB and ActiveMQ.

### Vehicles Damages Detection (2024)

The project focused on semantic segmentation for vehicle damage detection. Using a dataset from Roboflow and various metrics. Enabled the training and testing of both state-of-the-art and custom architectures.