Altice Labs Innovation Summer Camp 2024 - Secure Software Development Lifecycle

Código/Code	Summer Camp'24_SSDLC
Departamento/Department	ISC21
Orientador/Tutor	Mafalda Guimarães Nunes
ID	N15
Estagiário/Trainee	<a preencher pelos RH>

Tema /Título/Title	Secure Software Development Lifecycle
Âmbito/Enquadramento /Freamwork	Security is an important part of any application that comprises critical functionality or personal/sensitive data. Recent cyber attacks and the approval of more strict regulations put tremendous pressure on the need for various industries to ascertain the security of their products and services. Security applies at every phase of the software development life cycle (SDLC), starting from the requirements gathering stage to the deployment and maintenance of the application. It includes educating developers on the best secure coding practices and available frameworks for security, conducting an architecture risk analysis at the start, considering security when planning and building test cases, and using tools for automated security tests on the CI/CD pipeline. With dedicated effort, security issues can be addressed in the SDLC pipeline well before deployment to production. This reduces the risk of finding security vulnerabilities in an application and minimizes the impact when they are found. Altice Labs is continuously working on improving its secure software development lifecycle methodology and this project fits into that context.
Objetivos do Projeto/Goals	The main goal of this project is to improve the secure software development lifecycle methodology currently recommended at Altice Labs. Some work has already been done regarding the comparison and selection of open-source tools for static analysis, dependency analysis, and dynamic analysis. This project should continue that work, by adding to the comparison open-source tools for interactive analysis and package signature and/or encryption, as well as commercial tools for static analysis, dependency analysis, dynamic analysis, and interactive analysis.
Atividades/Activities	Plano de trabalhos: • Review the selected tools for CI/CD security; • Research, compare, and select new promising open-source tools for interactive analysis; • Research, compare, and possibly select commercial tools for CI/CD security; • Final report - document all the research and the main findings of the project.
Tecnologias envolvidas/Involved technologies	• GitHub and GitHub Actions; • CI/CD Security Tools (SAST, SCA, DAST, IAST, packages signature and/or encryption).
Requisitos/Requirements	Basic security knowledge.
Orientador/Tutor	Mafalda Guimarães Nunes
Email (extenso)	mafalda-g-nunes@alticelabs.com
Local / Place	Aveiro
Modelo de Trabalho/Work Model (Remote/Mix/Local)	Mix
Duração/Duration	1 to 3 months
Data de Inicio/Start_Date	To be defined
Data de Fim/Due_Date	To be defined

Entre que datas/Between dates	Between July and September
Observações/Observations	