2026 November

Alberto Fernández de Retana

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Experience

AI Red Team (Contractor) — **Gray Swan AI** — **Sep 2026 –**

Lecturer — **University of Deusto** — **feb 2026 – jun 2026**

- Delivered a first-year undergraduate course in C programming. Developed and deployed a custom LeetCode-style platform featuring over 100 programming exercises to support hands-on learning through automated code evaluation and interactive practice.

Research Intern — **IMDEA Software** — **dic 2021 – aug 2022**

- As an intern, I created a tool that allows browsing websites through the five leading browsers, utilizing a proxy to collect all communications. Supervised by *Srdjan Matic & Juan Caballero*.

Research Technician — **RIASC** — **oct 2020 – nov 2021**

- Implemented attacks detection (e.g., DDoS) at the network layer using Convolutional Neural Networks (e.g., Resnet18) on NetFlow V5 data from real traffic in Castile and Leon. Supervised by *Vicente Matellán*

Research Intern — **DeustoTech** — **nov 2018 – jul 2020**

- During my bachelor's, I extended a Chrome DevTools Protocol based web crawler used in top research, implementing WebSocket comms capture and WebAssembly extraction and building an analysis pipeline. I designed detection techniques including reputation scanners, WebSocket behavior analysis, VirusTotal integration, and security header checks, focused on identifying cryptojacking activity, and tested the approach across more than 1,500 websites from different datasets. [Bachelor Thesis (ES)]. Supervised by *Igor Santos-Grueiro*.

Publications

- **Alberto Fernández-de-Retana**, Jannis Rautenstrauch, Igor Santos-Grueiro and Ben Stock. *"A Permissions Odyssey: A Systematic Study of Browser Permissions on Modern Websites"*. ACM Internet Measurement Conference (IMC) 2025 [pdf][code].
- **Alberto Fernández-de-Retana** and Igor Santos-Grueiro. *"Keep your Identity Small: Privacy-preserving Client-side Fingerprinting"*. Arxiv 2023. [pdf].
- **Alberto Fernández-de-Retana**, Alberto Miranda-García, Ángel Manuel Guerrero, Camino Fernández-Llamas. *"Attacks Detection on Sampled Netflow Traffic Through Image Analysis with Convolutional Neural Networks (CNN)"*. CISIS 2021. [pdf].

Talks

- **[2025] "Exploring Browser Permissions and Exploiting Permission Hijacking":** Talk about Browser Permissions and threat models with two real case studies of vulnerabilities I found. Presented at **EuskalHack, DefCamp and GreHack. [Slides]. Research nominated by the community for the annual PortSwigger Web Security Research Awards** [link]. Also featured in Issue 7 of Paged Out!
- **[2024] "Web-Security Introduction":** Presented a session to 3rd-year Computer Science students as part of their Web Engineering course. University of Deusto. [slides].
- **[2023] "How to start in Cybersecurity?":** Presented sessions to 1st-year and 3rd-year Computer Science students. University of Deusto. [slides].

Vulnerability Research & CVEs

- **Wagtail — Stored XSS attack via v3 write API and third-party HTML editors.** CVSS 7.3 [Security Advisory]
- **Ajenti — Script origin injection through the X-Url-Prefix header (incomplete fix of CVE-2026-27975).** CVSS 8.3 [Security Advisory]
- **Webmin — Stored XSS leading to root-level RCE.** CVSS 9.6 [Fix]
- **Horilla HR — Unauthenticated Remote Code Execution (RCE).** CVSS 8.8 [Security Advisory]
- **LiveChat and Glassix — Browser Permission Hijacking.** Discovered vulnerabilities in two chat widgets; both were reported and fixed in 2025. [Research and technical details]
- **Cross-Site Scripting (XSS) — euskadi.eus.** Discovered and responsibly disclosed a vulnerability affecting a Basque public institution's website; fixed in 2023.

Additional Experience

- **W3C Security Interest Group Invited Expert**.[link]
- **Web Almanac 2024** by HTTP Archive: I contributed as a reviewer for the Security (link) and Privacy (link) chapters.
- Founding member (2024) of ***0xDecode*** local community with more than 340 members. Organized two summer schools, including a **beginner-friendly Capture The Flag (CTF) competition** in the second edition (2026).
- **Green Belt. PWN College**.
- I found a **XSS in the webpage of a public institution** in the Basque Country (*euskadi.eus*) where citizen personal information is stored (e.g., education titles, scholarship processes...). Reported and fixed. 2023.
- **Cispa Summer School 2023**. I attended System Security summer school.
- **Junior Penetration Tester certification (eJPT) 2021**.
- **Spanish Society Of Academic Excellence.** I was selected in the National Ranking of Informatics Engineering as one of the best and brightest graduates in the country.
- **Talentia Program.** Selected to participate in the Talentia program during my bachelor's studies, which focuses on developing students' transversal skills and connecting them with companies in the Basque Country.

CTF Experience

I enjoy participating in CTFs as part of the Thehackerscrew, ISwearIGoogledIt team, ECSC spanish team, solo or other teams. CTF Coach of 0xDecode team. The following points highlight CTF achievements that I am particularly proud of:

- 6th position (PwnCrew). On-site. Cagliari, Italy. **Srdnlen CTF Finals** [2026].
- Style-Your-Alpaca challenge creation for **AlpacaHack Daily** [2026].
- I designed two web challenges for **AsisCTF Finals 2025** [2025].
- I designed two web challenges for **CrewCTF 2025** [2025].
- 7th position (Thehackerscrew). **SAS Quals 2025** [2025].
- 6th position (Thehackerscrew). On-site. Hong Kong. **HKCERT CTF Finals** [2025].
- 4th position (Thehackerscrew). **HKCERT CTF Quals** [2024].
- 7th position (Thehackerscrew). On-site. Bali, Indonesia. **SAS CTF Finals** [Official Video][2024].
- 9th position (Individual). **AlpacaHack Round 2 (web)** [2024].
- 4th position (Saarsec). **ENOWARS 8** [2024].
- 2nd position (Spain ECSC). **Akasec CTF** [2024].
- 30th position (PaellaConTxorizo). **CyberSecurityRumble Quals** [2024].
- 59th position (Individual). **OpenECSC 2024 (Round 1)** [writeup][2024].
- 20th position (ISwearIGoogledIt). **L3akCTF** [2024].
- 3th position (Individual). **Sh3llc0n conference CTF** [2024].
- 10th position (Individual). **Spanish ECSC CTF Quals** [2023].
- 58th position (Solo). **LakeCTF** [2022].

Education

University of Deusto **PhD** **2022 – 2024 (Incomplete)**

- Topic: Web Security & Privacy.
- Supervisors: Igor Santos-Grueiro & Pablo García-Bringas.
- **Research Visit**: Ben Stock's Group (SWAG) at CISPA. From April to July 2024 (4 months).

University of Leon **(MSc) Research in Cybersecurity** **2020 – 2022**

- Distinction in two courses (Honors). Average grade: 8.54

University of Deusto **Computer Engineering Degree** **2016 – 2020**

- Distinction in Cloud Computing (Honors). Average grade: 8.15