# MATHAIOS MATHAIOU

Computer Science Student · Cybersecurity & AI Enthusiast · LLM Research · Erasmus Scholar · Competitive MMA Athlete

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## PROFESSIONAL SUMMARY

Computer Science student at Ionian University specialising in cybersecurity, with research experience in Artificial Intelligence and Large Language Models. Actively building offensive- and defensive-security skills through the Google Cybersecurity Professional Certificate, continuous practice on TryHackMe, and hands-on projects - including a machine-learning phishing URL detector and a credential brute-forcing tool built for coursework. Working on publishing CS-RAG, an offline retrieval-augmented generation system, at HILab, Ionian University. Selected for two consecutive Erasmus+ exchanges - Universidad de Málaga and Universitat Rovira i Virgili - achieving Spanish A2 certification in under 2.5 months. Freelance web developer with a sustained client base since 2024. Competitive MMA athlete with seven years of professional-level training, bringing high-performance discipline, pressure management, and relentless goal pursuit to every technical and collaborative endeavour.

## EDUCATION

**B.Sc. Computer Science** · **Ionian University — Dept. of Informatics** · Corfu, Greece

*2024 – Present*

- All examinations passed successfully; research-intensive track with a focus on AI, ML, and distributed systems, now specialising in Cybersecurity for the final 1.5 years of the degree
- Active collaborator with faculty on AI research projects; working on publishing CS-RAG at HILab

**Erasmus+ Exchange** · **Universidad de Málaga (UMA)** · Málaga, Spain

*Feb 2026 – Jul 2026*

- Competitively selected for the Erasmus+ international mobility programme
- Attained Spanish A2 certification in 2.5 months — a full level ahead of schedule, demonstrating exceptional language acquisition
- Maintained full research output and client web-development work throughout the exchange
- Continued competitive MMA and Brazilian Jiu-Jitsu training with local clubs in Málaga

**Erasmus+ Exchange** · **Universitat Rovira I Virgili (URV)** · Tarragona, Spain

*Sep 2026 - Present*

- Competitively selected for a second consecutive Erasmus+ mobility placement
- Advanced coursework in Computer Science with a focus on AI and cybersecurity electives
- Continued research output, client web-development work, and MMA/BJJ training throughout the exchange

## RESEARCH

### Paper in Progress

[1] *CS-RAG: A Fully Offline RAG System for Computer Science Lecture Understanding*

Paper in preparation at HILab, Ionian University

Offline question answering over CS lecture material, built with LlamaIndex, Qdrant and local LLMs via Ollama

### Research Projects

- Co-developing a Large Language Model (LLM) architecture from scratch with faculty supervision
- Erasmus+ WICT Project - completed full Data Science & AI certification cycle; built and validated predictive ML models with an international cross-institutional team on real-world datasets
- AI in Cancer Research Summer School - applied machine learning methods to biomedical datasets in an intensive research environment

## PROFESSIONAL EXPERIENCE

**Freelance Web Developer** · **Self-Employed** · Remote · Greece & Spain
*2024 – 2026*

- Design and delivery of full-stack websites and e-commerce platforms for clothing brands, SMEs, and individual clients
- Front-end development (HTML/CSS/JavaScript/WordPress) with back-end integration and CMS customisation
- Full project lifecycle ownership: client discovery, technical specification, iterative build, deployment, and post-launch support
- Sustained active client work remotely during Erasmus+ exchange in Spain - demonstrating self-management and professional reliability

## SECURITY & MACHINE LEARNING PROJECTS

**Phishing URL Detector** · **Personal Project** · Python · scikit-learn · Flask
*github.com/Matheos13/phishing-url-detector*

- Built a machine-learning classifier that scores a URL as phishing or safe from its text alone, with a Flask web interface for real-time checks
- Found and fixed a dataset bias the model was exploiting instead of learning genuine signal, then engineered a trusted-domain feature — improving phishing recall from 0.65 to 0.80

**SSH Brute-Force Tool** · **Security Coursework Exercise** · Python · Networking
*github.com/Matheos13/ssh-bruteforce-attempt-1*

- Built a credential brute-forcing script to test username/password combinations against an SSH server on authorised lab infrastructure
- Explored credential-security weaknesses from the attacker's perspective to inform stronger defensive practices

## TECHNICAL SKILLS

**Languages:** Python · C++ · JavaScript · HTML / CSS
**Security:** Phishing/Threat Analysis · Credential Security Testing · Network Fundamentals (SSH/TCP-IP) · Linux · TryHackMe (ongoing) · Google Cybersecurity Professional Certificate (in progress)
**Frameworks & Tools:** WordPress · React (foundations) · Flask · Git · Pandas · Scikit-learn
**AI / ML:** Large Language Models · RAG Systems · Retrieval Pipelines · Bias Evaluation · Data Analysis
**Research:** Scientific Writing · Systematic Literature Review · Experimental Design · LaTeX
**Professional:** Client Management · Technical Documentation · Cross-cultural Collaboration · Remote Work

## LANGUAGES

**Greek** — Native | **Russian** — Native | **English** — Proficient · IGCSE Cambridge | **Spanish** — A2 certified (2.5 months)

## ATHLETIC RECORD

- Mixed Martial Arts (MMA) — Competitor since 2019; professional fight experience; active training in Greece and Málaga
- Brazilian Jiu-Jitsu — Blue Belt (2025); competing toward the Greek National Championship
- Karate — Brown Belt; 4 years structured practice and graded competition

*Seven years of high-level martial arts competition have developed elite composure under adversity, rigorous self-discipline, and a performance-first mindset — directly transferable to research environments, client delivery, and team collaboration.*