

# José António Portela Areia

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## WORK EXPERIENCE

- Invited Assistant Professor**, ESTG - Polytechnic of Leiria 09/2023 – present  
- Teach in the Short Cycle Cybersecurity and Computer Networks programme. Leiria, Portugal
- Research Fellow**, CIIC - Computer Science and Communication Research Centre 09/2023 – 01/2025  
- Researched ML model vulnerabilities, including privacy and security. Leiria, Portugal  
- Conducted a plethora of attacks on computer vision models.  
- Developed generative network models to create adversarial samples.  
- Authored a paper on these findings.
- Research Fellow**, CIIC - Computer Science and Communication Research Centre 04/2022 – 04/2023  
- Developed IoT network simulations for Smart City modelling. Leiria, Portugal  
- Conducted cyber attacks on simulations and analysed traffic data.  
- Developed DNN and ML models for IoT intrusion detection.  
- Published research article with key findings and dataset.
- Full Stack Developer**, Estudar Portugal 02/2019 – 02/2021  
- Developed a Laravel web app for HR, document, and finance management. Leiria, Portugal  
- Designed the application's data model and graphical interfaces.  
- Managed and maintained web and email servers.

## EDUCATION

- Master Science Degree in Cybersecurity & Digital Forensics**, ESTG - Polytechnic of Leiria 09/2023 – present  
- Grade: 18/20 (*Currently*) Leiria, Portugal
- Bachelor Degree in Computer Engineering**, ESTG - Polytechnic of Leiria 10/2020 – 07/2023  
- Grade: 16/20 Leiria, Portugal
- Short Cycle Programmes (TeSP) in Web Dev and Multimedia**, ESTG - Polytechnic of Leiria 09/2018 – 07/2020  
- Grade: 20/20 Leiria, Portugal

## RELEVANT PROJECTS

- Adversarial DCGAN** 🔗  
- Developed a generative network to create adversarial samples that misclassify a given CNN model.  
- Tested adversarial samples on five pre-trained CNN models.  
- Evaluated sample quality using state-of-the-art metrics such as LPIPS and FID.
- Post Quantum Cryptography** 🔗  
- Conducted a comprehensive study on quantum computing and cryptography.  
- Developed a PoC notebook on the state of post-quantum cryptography.  
- Authored a paper on the findings.
- Dvorak** 🔗  
- Developed Python malware to retrieve and decrypt web browser passwords.  
- Tested and analysed malware on Chrome, Firefox, Brave, Opera GX, and Edge.  
- Published a research article detailing key findings.
- Le Paglie** 🔗  
- Developed an ML-based surveillance system that recognises users and alerts for unrecognised individuals.  
- Deployed using Laravel, Vue 3, Python, and Node.js.  
- Implements HTTP/HTTPS, FTP/FTPS, and RTSP protocols.

## **PUBLICATIONS**

<b>Fooling Rate and Perceptual Similarity: A Study on the Effectiveness and Quality of DCGAN-based Adversarial Attacks</b> , ARES - Under Review	03/2025
<b>IoMT-TrafficData: Dataset and Tools for Benchmarking Intrusion Detection in Internet of Medical Things</b> , IEEE Access <a href="#">↗</a>	08/2024
<b>Dvorak: A Browser Credential Dumping Malware</b> , Secrypt <a href="#">↗</a>	07/2024
<b>IoMT-TrafficData: A Dataset for Benchmarking Intrusion Detection in IoMT</b> , Zenodo <a href="#">↗</a>	07/2023

## **SEMINARS**

<b>Secure and Privacy in Machine Learning Models</b> , ESTG - Polytechnic of Leiria	06/2024
<b>Dataset Creation for ML-based Intrusion Detection</b> , ESTG - Polytechnic of Leiria	05/2024

## **AWARDS AND CERTIFICATIONS**

<b>Merit Grant Recipient</b> , Polytechnic of Leiria <a href="#">↗</a> Awarded a merit grant for achieving a perfect score of 20/20 in the TeSP of Web Development and Multimedia.
<b>Capture the Flag Competition</b> , Void Software & Hack The Box <a href="#">↗</a> Captured 4 out of 6 flags in an 8-hour competition, securing third place.
<b>CCNA - Introduction to Networks</b> , Cisco Networking Academy <a href="#">↗</a> Completed the course with a score of 91% in the ITN Final Skills Exam (PTSA) and 88.2% in the Final Exam.

## **SKILLS**

<b>Programming Languages</b> Python, Java, Lua, Perl, Haskell	<b>Technologies</b> PyTorch, Tensorflow, Keras, Scikit	<b>Tools</b> Linux, Git, Docker, Excel, LaTeX
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## **LANGUAGES**

<b>Portuguese</b> <i>C2, Native with full proficiency</i>	<b>English</b> <i>C1, Highly proficiency</i>	<b>French</b> <i>B1, Limited working proficiency</i>
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