Roberto D'Isanto

Computer Engineer

Registered with the Order of Engineers of the Province of Naples since 2022

Cybersecurity · Training · Development

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PROFILE

Computer engineer, self-employed. I work across cybersecurity, software development and IoT/cloud systems; teaching and technical training have long run alongside my consulting work. PhD candidate in Information Technology and Electrical Engineering at the University of Naples Federico II.

SKILLS

LANGUAGES

Python · Swift · C# · Bash

SECURITY

Pentesting · Network security · Reverse engineering · Fuzzing · Firmware analysis · IoT security · Mobile security · SDR

SYSTEMS & NETWORKS

Linux sysadmin · Virtualization · Docker & containers · Cloud (AWS) · Cisco networking · CI/CD · Git

IOT & EMBEDDED

IoT · Embedded firmware · LoRa · DJI drones · Unity (AR/VR)

EXPERIENCE

NRRP Expert 2026 – present

Regione Campania · Naples, IT

Specialist technical support to the regional government on the delivery of the Plan's projects, including AI pipelines and process automation.

Freelance Computer Engineer 2015 – present

Consulting, software development and technical training · Pozzuoli / Naples, IT

PRIVATE SECTOR

- **Galileo Engineering** (2026) — IoT and security consulting: Bluetooth Low Energy protocol analysis on Nordic-based devices, web tools for configuration and diagnostics (Web Bluetooth, Web Serial, RS-232), ESP32 firmware bridging to Wi-Fi/MQTT, a CI pipeline with automated tests.
- **Dabliu** (2023) — customised WLED open-source firmware and Mosquitto MQTT for the "Sagomata IoT" prototype.
- **Gematica** (2022 – 2023) — DJI Cloud API integration on a DJI Matrice 30T drone.
- **SecSi** — Android reverse engineering (AOSP Binder analysis).
- **Wstaff** (2017 – 2018) — Unity XR development: gamified VR training simulator for industrial presses and AR/VR apps for retail events.
- **"Palazzo San Teodoro"** (2016) — virtual tour for Oculus, built in Unity.

PUBLIC SECTOR

- **Municipality of Pozzuoli** (2023) — IT expert report on the integrity of certified-email (PEC) notifications in a tax court case.
- **University of Naples Federico II, DISMET** (2022) — backend of the "e-PediatricChronic Care" iOS app (MongoDB Realm, Sign in with Apple, push notifications).

TEACHING

Mentor — Cyber HackAdemy 2020 – 2025

University of Naples Federico II — in partnership with Accenture · Naples, IT

Teaching and tutoring across four editions (2020/21 – 2024/25) with a Challenge-Based Learning approach, on offensive and defensive security: network and software security, reverse engineering, fuzzing, IoT security and software-defined radio.

- Challenges by topic, team competitions and a final CTF in every edition.
- Project work with the industry partners, in 2024/25 also on generative AI (agent-orchestrated pentesting, LLM guardrailing, incident triage).

OTHER TEACHING

- **ITS Academy "ICT Campus"** (2026) — modules on IoT security, IoT penetration testing, network security and cloud.
- **Suor Orsola Benincasa University** (2026) — teaching in an NRRP school-to-university guidance project.
- **Leonardo Skills and Training** (2024 – 2025) — online courses on IoT and on Copilot and generative AI.
- **Sistemi Formativi Confindustria** (2025) — cybersecurity and Microsoft Copilot courses (Fondimpresa plans).
- **IFTS** (2024) — "Full Stack Developer" programme (Eurosoft) and employment-oriented courses (Gi Group).
- **High schools** (2024 – 2025) — NRRP and ESF+ courses for students (coding, IoT, cybersecurity, virtual reality) and teacher training at IIS "A. Tilgher", Ercolano; work-study with DIETI.
- **Italian Air Force** (2020 – 2022) — pentesting simulation in the FILMC exercise, CanSat project tutoring, network-security workshop in Florence.

LANGUAGES

Italian — native
English — professional working proficiency

CERTIFICATIONS

- Cisco CCENT
- Palo Alto Networks PCCET
- Microsoft MOS & MTA (×11)
- Apple Teacher — Swift Playgrounds
- EASA drone licences A1/A3 · A2

TALKS

Code Injection & Runtime Manipulation in iOS
Apple Developer Academy (Wuozzappen), 2019

Kivy: Python for mobile
DTLab, Federico II, 2020

Security by Example
Air Force Military Sciences Institute, Florence, 2021

Guest lectures in the Network Security course
University of Naples Federico II

PUBLICATIONS

Towards a Unified European Cybersecurity Skills Framework: Structural Insights from Expert Elicitation and International Standards
G. Perrone, N. d'Ambrosio, **R. D'Isanto**, M. Rak, L. Russo, S.P. Romano, M. Varlese. Array (Elsevier), vol. 30, 100728, 2026.

IoT Guardian: A Neuro-Symbolic Framework for By-Design Safe Home Automation
G. Celentano, **R. D'Isanto**, G. Perrone, S.P. Romano, M. Varlese. Workshop AI4DEMONS, Springer CCIS, to appear.

EDUCATION

PhD in Information Technology and Electrical Engineering 2023 – present
University of Naples Federico II — 39th cycle · Naples, IT

- EU project AKADIMOS (European Cybersecurity Skills Academy): structural analysis of the ECSF skills framework against NICE, SFIA, ESCO and CyBOK.
- Security assessment of the DIETI pneumatic SCADA testbed (Omron PLC, FINS and EtherNet/IP-CIP), from an STPA-Sec model to the attack.
- IoT Guardian, a neuro-symbolic framework for by-design safe home automation on Home Assistant: reference for the IoT side.
- Participation in NATO's "Cyber Coalition" exercise (2023 and 2025).

MSc in Computer Engineering 2021
University of Naples Federico II · Naples, IT
Thesis: *A study of the Android Keystore through Reverse Engineering*. iOS penetration-testing project (Apple Developer Academy "Wuozzappen" workshop). Collaboration with Microsoft and TIM WCAP on a HoloLens AR app for industrial-device monitoring.

BSc in Computer Engineering 2017
University of Naples Federico II · Naples, IT
Thesis: *Virtual Reality and Applications*.

Cisco Digital Ready Networking Bootcamp 2019
DTLab, Federico II · CCENT certification · Naples, IT

iOS Developer Academy 2017
Apple Developer Academy · Naples, IT
Swift, UI/UX, Git, CI/CD and cloud backend (Vapor, Docker, AWS).

PROJECTS & OPEN SOURCE

- **SkyRescue** — a flying Meshtastic node on an RC plane and FPV drones that brings LoRa coverage where there is no mobile network during search and rescue (ExpressLRS hardware, iNav, cloud backend).
- **iNav** — contributions to the open-source navigation firmware for UAV flight controllers.
- **Meshtastic** — contributions to the firmware for off-grid LoRa mesh networks.
- **MSRC** — contributions to the open-source multi-sensor telemetry converter for RC aircraft and drones.
- **PicaSim** — iOS and macOS port of the open-source flight simulator for radio-controlled aircraft, merged into the original project.
- Contributions to other open-source projects.
- **Hackathons** — HackRome (2026, winning project: SkyRescue); HackNight@Museum (Naples, 2019, winning project).