Nichita Roscin

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PROFILE

Information Security postgraduate (MSc, Royal Holloway) with a BSc Hons in Computer Science from Durham. I build and self-host full-stack software in Python and TypeScript, and have applied machine learning to security problems, including an MSc dissertation deepfake detector (0.981 AUC on FaceForensics++). Open to security monitoring, detection and incident response, AI integration, and software or infrastructure roles.

EDUCATION

Royal Holloway, University of London – MSc Information Security 2025 – 2026

- Modules: Introduction to Cryptography, Security Technologies, Fundamentals of Computer and Network Security, Security Management, Critical Information Security, Usable Security and Privacy.
- Dissertation: hybrid visual–forensic deepfake detector (see Projects).
- Graduating with an expected distinction-level grade.

Durham University – BSc (Hons) Computer Science 2022 – 2025

- Dissertation: designed a system that encrypts data into visual QR codes on 3D-printed objects and engineered a computer-vision ML algorithm to decrypt it, achieving 65% accuracy under variable lighting.
- 2:2 Hons

CERTIFICATIONS

Complete Python Developer: Zero to Mastery – Zero To Mastery Academy (course certificate) October 2026

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, SQL, HTML/CSS
Web & backend: Node.js, React, REST APIs, Vite, PostgreSQL
Machine learning: PyTorch, scikit-learn, pandas, NumPy, OpenCV, computer vision
Security: Cryptography, authentication & authorisation, network security, secure software development
Tools & platforms: Git, Docker, Docker Compose, Vercel

PROJECTS

Hybrid Visual–Forensic Deepfake Detection | *MSc dissertation* | *Python, PyTorch, EfficientNet-B4, OpenCV* 2026

- Built a two-stream detector fusing EfficientNet-B4 with 406 hand-crafted forensic features (error level analysis, DCT, noise residuals, FFT) through a learned attention gate; trained on 49,996 FaceForensics++ face crops with identity-disjoint splits.
- Reached 0.981 AUC, ahead of the CNN alone (0.972); tested robustness to JPEG re-compression and on unseen Celeb-DF-v2, where retraining with degradation augmentation lifted hybrid AUC from 0.726 to 0.783. Added a Gradio demo.

Physical Data Encryption & ML Decryption | *BSc dissertation* | *Python, OpenCV, machine learning* 2025

- Designed a novel scheme for encoding data as visual QR codes on 3D-printed objects, and built a computer-vision ML algorithm to scan and decrypt it at 65% accuracy under variable lighting.

FileX – self-hosted PDF & document toolkit | *Python, FastAPI, React, Docker, Redis* 2026

- Open-source toolkit of 30 tools (merge, split, OCR, convert, sign, encrypt) behind a web UI and REST API; FastAPI queues jobs in Redis to separate Docker Compose worker profiles.
- Hardened by default: localhost-only binding, read-only container filesystems, per-service Redis ACL users with Docker secrets, files auto-deleted after 24 hours.

Keel – self-hosted, Supabase-compatible backend | *TypeScript, PostgreSQL, Docker Compose, Deno* 2026

- Backend platform on my home server providing Postgres, REST, auth, file storage, realtime and edge functions, with one isolated database per app and a web dashboard. Standard supabase-js clients work unchanged; it serves the content of my own website and many other apps I build.

Agentic Office | *JavaScript, Node.js, three.js* | *open source* 2026

- Turns Claude Code subagents into characters in a live 3D office so you can see which agent is thinking, typing or talking; zero dependencies, runs locally from one command.

Multi-client TCP Chat Server | *Networks coursework* | *Python sockets* 2023

- Threaded client–server chat with username registration, presence tracking, private messaging and a custom length-prefixed message framing protocol to handle TCP stream boundaries.

INTERESTS

Boxing, football, tennis