NICHITA ROSCIN

Information Security & Computer Science Graduate

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PROFILE

Information Security MSc graduate (Royal Holloway) with a Computer Science BSc from Durham. Project experience across applied cryptography, anomaly detection, secure network programming and secure web development, backed by strong Python and machine learning skills. Seeking a graduate role in security engineering, security analysis or secure software development.

EDUCATION

Royal Holloway, University of London 2025 – 2026

MSc Information Security (with a Year in Industry) — London, UK

- Core modules: Network Security, Cryptography, Secure Software Development, Risk Management.

Durham University 2022 – 2025

BSc (Hons) Computer Science — Durham, UK

- Dissertation: designed and implemented a novel system for encrypting data into visual QR codes on 3D-printed objects, with a computer-vision ML decoder achieving 65% accuracy under variable lighting.
- Coursework across data science, networks, machine learning, AI search and full-stack development.

TECHNICAL SKILLS

Security & Networking	Data encryption, network security, secure file transfer, anomaly detection, authentication & authorisation, TCP socket programming
Programming	Python, C, JavaScript, Assembly, SQL, SPARQL, HTML/CSS
Machine Learning	scikit-learn, pandas, NumPy, OpenCV (computer vision), regression, TD3, anomaly detection
Tools & Platforms	Git, AWS, Node.js/Express, VirtualBox, Unity, Jupyter, Postman

PROJECTS

Physical Data Encryption & ML Decryption BSc Dissertation

- Designed a novel cryptographic scheme for encoding encrypted data onto 3D-printed physical objects as visual QR codes.
- Built a computer-vision decoder in Python/OpenCV that scans and decrypts the object, reaching 65% accuracy under varied lighting and angles.

Anomaly Detection System Prototype

- Implemented a nature-inspired (artificial immune system) detector classifying activity as ‘self’ or ‘non-self’, mirroring a host-based intrusion detection system.
- Translated the theoretical algorithm into a working prototype achieving a 70% detection rate on anomalous data.

Secure Network File Transfer & Messaging Client C

- Developed a networked client/server application supporting file upload, download and encrypted peer-to-peer messaging.
- Implemented a length-prefixed framing protocol for reliable transfer over TCP, plus isolated direct messaging to preserve confidentiality between users.

Secure E-Commerce Web Application Node.js, Express

- Built a full-stack storefront with separate customer and admin portals, cascading catalogue filters and secure session-handled cart persistence.
- Designed a self-registering REST API with documented endpoints and automated Mocha/Chai integration tests.

Predictive Stock Analysis Model Python, scikit-learn

- Trained and evaluated regression models on 10 years of AAPL price data, automating a cleaning and normalisation pipeline over 50,000+ records.
- Benchmarked a random forest against a linear baseline and documented the methodological limits of the setup in the write-up.

INTERESTS

Boxing, football and tennis. Home networking and self-hosted infrastructure projects.