

# Ryan Cranie

Last updated in December 2024

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## Experience

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### ITNSA Squad Member

WorldSkills UK

United Kingdom

Nov 2022 - Aug 2026

- Top performant in nationwide technical IT competitions - selected from over 200 participants, securing a top-4 spot to enter WorldSkills UK's IT networking training program ([competition](#) 📄)
- Committed to a structured training regimen alongside academic studies, using Cisco CML, Microsoft Server, and Linux CLI, consistently achieving 95%+ accuracy in network technician simulations ([article](#) 📄)
- Awarded a WorldSkills UK *Certificate of Excellence* in national competition

### Team UK IT-NSA Representative

WorldSkills Asia 2023

Abu Dhabi, UAE

Nov 2023 - Dec 2023

- Chosen individual to represent the UK in a prestigious 3-day troubleshooting competition out in Abu Dhabi, tasked with building and configuring complex networks under live audience pressure
- Resolved network configuration issues, configured and redistributed EIGRP and OSPF, implemented successful Linux/Microsoft server configuration

## Projects

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### Evaluating Lightweight Cryptography for Secure Firmware Updates in IoT

Aug 2024 - May 2025

- Undergraduate thesis exploring secure, efficient cryptographic protocols for secure firmware updates in resource-constrained smart home IoT devices
- Implemented symmetric protocols (e.g., AES-128) and asymmetric protocols (e.g., ECDSA, Ed25519) to determine their suitability in real world applications

### Security Assessment of a Simulated Chemical Plant ICS

Oct 2024 - Dec 2024

- Conducted security assessment of an Industrial Control System, including vulnerability identification and exploitation (MITM, brute force) using tools like Nmap, Wireshark, and Ettercap
- Designed and a Python-based script to overwrite HMI controls, deployed an ettercap filter MITM attack to render the HMI useless.

### Dijhitech Research Labs - Internal Penetration Test

Jan 2024 - Apr 2024

- Directed a 6-member team in a black-box penetration test, dedicating 50+ hours to uncover and document 9 critical vulnerabilities, enhancing security posture.
- Utilized kali tools including Nmap, SSLScan, DIRB, Netcat, and ltrace for comprehensive reconnaissance, vulnerability assessment, and exploitation.

## Education

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### Glasgow Caledonian University

BSc (Hons) in Cyber Security & Networks

Sep 2023 - May 2025

- Expected Classification: 1st
- **Notable Modules:** Enterprise Networking, SOC Operations, Applied Penetration Testing

### New College Lanarkshire

HND in Cyber Security

Sep 2021 - May 2023

- Graded Unit: A
- **Notable Modules:** Cisco Switching and Routing, Digital Forensics, Ethical Hacking

### [REDACTED]

Secondary Education

Sep 2018 - Jun 2022

- **Scottish Highers:** ABBB inc. Computing (A), Maths (B)
- **10x GCSEs:** 8-5 inc. ICT (8), Maths (8)

## Skills

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**Technical:** Network Design/Implementation, Troubleshooting, Python, git, Linux, Powershell, Kali tools, Documentation

**Achievements:** University Class Rep, UKMT Maths Challenge Merit, eSports Success, WorldSkills Squad UK