Nikita Kroshko

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Education

University of Manchester   *Sept 2024 – Jun 2027*
BSc (Hons) in Computer Science   *(expected)*

- **Coursework:** Algorithms and Data Structures, Programming Languages & Paradigms, Software Engineering, Processor Microarchitecture, Introduction to AI, Database Systems, Microcontrollers, Machine Learning, System Architecture
- **Degree Qualification:** First Class Honours in Computer Science (84.8%)

International School of Belgrade   *Aug 2021 – May 2024*
International Baccalaureate Bilingual Diploma

- GPA 7/7
- IB: Higher Level, Mathematics Analysis and Approaches 7, Physics 7, English 7

Experience

AWS APAC Solutions Architecture Job Simulation   *Manchester, UK (Forage)*
Amazon Web Services   *June 2025*

- Built a single scalable hosting solution using AWS Elastic Beanstalk to improve app performance.
- Configured EC2, RDS, and Auto Scaling for reliability and speed.
- Explained the architecture in clear, non-technical terms for client clarity.
- Provided an estimated cost breakdown based on usage and AWS pricing tiers.

Cybersecurity Job Simulation   *Manchester, UK (Forage)*
Mastercard   *October 2024*

- Analyzed the security level of a sample group of 700 employees.
- Determined which groups are the most susceptible to social engineering attacks.
- Created a socially engineered phishing email in order to penetration-test the company.
- Wrote a presentation which taught valuable information about how to avoid hostile emails.

Software Engineering Job Simulation   *Manchester, UK (Forage)*
Goldman Sachs   *October 2024*

- Researched into the cybersecurity topic of password protection, cracking, and hashing.
- Decrypted 100% of the sample list of passwords using Hashcat.
- Wrote a professional memo which, in non computer science language.
- Explained the vulnerabilities of the company and what needs to be done to strengthen security.

Skills

- Problem Solving, Critical Thinking, Communication, Teaching, Analysis, Computer Science, Mathematics
- Programming (Java, Python, Ruby, Bash, JavaScript, HTML, CSS, React, RISC-V Assembly, Verilog)
- Languages (English C2, Russian C1, German B1, Serbian A1, Macedonian A1)

Projects

Ruby Blog   Live Demo GitHub
- Full-stack blog application built using Ruby on Rails, JavaScript, and Tailwind CSS, with a focus on Rails conventions, MVC architecture, and scalable design practices.
- Deployed and tested using Heroku for ease of access and live experimentation.
- Tested the application with 5 students at the university using standard quality assurance procedures.
- Learned user authentication, routing, and deployment workflows.

AI Blog Generator   GitHub
- Python-based tool to auto-generate blog content for layout testing in Ruby Blog using Ollama.
- Helped simulate dozens of realistic posts for the frontend UX validation.
- Generates a new blog title and content every 5 seconds, depending on device performance.
- Tested output using 3 open source LLM models, deepseek-r1:8b, llama3.2, gemma.

Spot QOL Extension   GitHub
- Browser extension to improve readability of the University of Manchester's Spot platform.
- Custom dark-mode and styling built using JavaScript and Manifest V2.
- Targeted for better accessibility in low-light environments.
- Developed using Firefox Developer Tools for streamlined testing.

Noom Racing Quiz   University Gitlab
- Multiplayer quiz racing game built with React, Node.js, TypeScript, and Tailwind CSS.
- Process up to 10 players WebSockets connections for each lobby with a hypothetical limitless lobby count.
- Players answer trivia to speed up the car and dodge obstacles, game state syncrhonized in real-time via WebSockets.
- Learned teamwork, socket communication, and full-stack collaboration.

Extracurricular Activities

Chess Club
Founder / Leader
- Founded a popular chess club at the school, helped many students learn how to play chess, taught many different chess techniques mathematical, logical, and psychological.
- Signed the club up for a chess championship between international schools, came out first from the school district.
- Increased student Elo ratings on chess websites from 500 to 1200 and above.

Awards

University of Manchester   Sep 2024 - Jun 2027
Sep 2024 - Jun 2025 Netcraft prize (Top 10 student in computer science cohort)

International School of Belgrade Awards   Aug 2021 - May 2024
Aug 2021 - Jun 2022 Honors and Higher Honors
Aug 2022 - Jun 2023 Honors and Higher Honors
Aug 2023 - May 2024 Higher Honors Twice, and Salutatorian