Nikita Kroshko

⊙ Manchester ✉ kroshkonikita@gmail.com 📞 0 7466 653842 in Nikita Kroshko ⃝ Nikita Kroshko

Education

University of Manchester *Sept 2024 – Jun 2027*
BSc (Hons) in Computer Science *(expected)*
- **Coursework:** Algorithms and Data Structures, Programming Languages & Paradigms, Software Engineering 1 and 2, Processor Microarchitecture, Introduction to Artificial Intelligence, Database Systems, Microcontrollers, Distributed Systems, System Architecture
- **Degree Qualification:** First Class Honours in Computer Science (84.8%) top 10 in cohort of 300

Projects

C++ Web Browser GitHub
- Designed and implemented a multi-tab desktop web browser using C++ and Qt Creator, featuring intuitive navigation controls, a functional URL bar, and responsive window management.
- Integrated the Qt WebEngine module to support modern browsing features including seamless JavaScript execution, HTML/CSS parsing, and advanced WebGL rendering.
- Built in user-friendly features such as intelligent pop-up blocking, automatic tab renaming with page titles, and efficient browsing history handling for improved usability.
- Gained practical experience with networking APIs, RESTful API integration, and event-driven GUI programming by delivering a polished, fully functional desktop application.

MU0 Processor Implementation MU0
- Designed the MU0 processor in Verilog, including a fully functional ALU, while gaining strong knowledge of the ISA, opcodes, and instruction execution through detailed assembly programming.
- Validated functionality with comprehensive Questa simulations and robust testbenches, ensuring correctness and stability across all supported instructions and processor operations.
- Implemented the design on an FPGA board, confirming accurate hardware execution and advancing expertise in digital logic, computer architecture, and practical FPGA development workflows.

Skills

- Problem Solving, Critical Thinking, Communication, Teaching, Analysis, Computer Science, Mathematics
- Programming (Java, Python, C, C++, Ruby, Bash, JavaScript, HTML, CSS, React, RISC-V, Verilog, Git)
- Spoken Languages and Fluency Level (English C2, Russian C2, German B1, Serbian A1, Macedonian A1)

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 improved reliability and optimized speed.
- Explained the system architecture in clear, concise, non-technical terms for client clarity.
- Provided a detailed estimated cost breakdown based on usage patterns and AWS pricing tiers.
- Identified $500 in monthly savings for the assigned team through migration from the existing cloud provider.

Academic Awards

University of Manchester Awards Sep 2024 - Jun 2027
Sep 2024 - Jun 2025 Netcraft prize (Top 10 student in c.s. cohort of 300)
International School of Belgrade Awards Aug 2021 - May 2024
Aug 2023 - May 2024 Higher Honors Twice, and Salutatorian
Aug 2022 - Jun 2023 Honors and Higher Honors
Aug 2021 - Jun 2022 Honors and Higher Honors