Ivan Nikitin

(+44) 7517891393 | ✉ ivan@niktivan.org | 🏠 niktivan.org | ⊙ Apolexian

Education

University of Glasgow   *Leaving the program*

PHD COMPUTING SCIENCE

I work on concurrency and communication theory to improve the network protocol standardisation process. As part of my work, I combine my knowledge of protocols at the transport layer such as TCP and QUIC, and my knowledge of formal methods to ensure safe and inter-operable protocol implementations.

University of Glasgow   *Graduation: July 2022*

BSC (HONS) IN COMPUTING SCIENCE WITH A SPECIALISATION IN DISTRIBUTED AND PARALLEL SYSTEMS.

Classification: 1st Class. I have completed my studies with an A-grade average across all courses and projects. My final year project under the supervision of Dr Colin Perkins focuses on analysing the QUIC stack as a transport layer protocol for MQTT in hardware-constrained IoT devices. I ported an existing MQTT implementation to use QUIC instead of TCP and compared the performance of the resulting implementation to its TCP counterpart using a mininet test bench.

Experience

Huawei   *Jun 2022 - October 2022*

RESEARCH INTERN   *Edinburgh*

- Worked on a team responsible for the execution engine of a graph database that was implemented in the Rust programming language.
- Solely designed and developed lock-free versions of a roaring bitmap and other concurrent data structures that were used in the engine.
- Solely created bench-marking tools to assess the realistic the speed of unions, intersections, insertions, deletions and updates on the concurrent data structures.
- Increased the efficiency of all operations by approx. 200% compared to the existing HashSet implementation.

Amazon   *Jun 2021 - September 2021*

SOFTWARE ENGINEER INTERN   *Remote*

- Reduced the time needed to schedule a marketing campaign from several weeks to a day.
- Designed and implemented a system to automate the scheduling of campaigns on the Amazon gifting page across all regions and locales.
- Developed the backend API in Kotlin using the spring boot framework and various AWS services, and the frontend in React.
- Responsible for setting up and managing my project's deployment pipelines including the final stages of deployment into live production environments.
- Demoed to the Amazon community shopping space and received positive feedback on the projected increase in number of possible campaigns.

University of Glasgow   *September 2020 - now*

GENERAL TEACHING ASSISTANT   *Glasgow*

- Responsible for overseeing groups of 60-100 students during laboratories, answering questions, supervising group projects and guiding the learning process.
- Marked various courseworks and exams which included verifying non-standard answers and providing detailed feedback on students' solutions. Invigilated in-lab exams.
- Responsible for assisting with course materials for computer science fundamentals, fundamentals of programming languages, functional programming in Haskell, and systems development in Python and Java.

Autodesk   *Jun 2020 - September 2020*

SOFTWARE ENGINEER INTERN   *Remote*

- Devised a wireless method of sending files directly to a 3D printer from within Autodesk's slicing software by Developing an extension.
- Demoed to principal engineers in the field and technical consultants working with FFF at Autodesk, receiving overwhelmingly positive feedback.
- The extension is now deployed to customers on the Autodesk store (here).

Extracurricular

Computer Science Academy Africa

ORGANISER   *October 2022 - now*

- Created the coding questions for a programming competition for students in Nigeria.
- Helped create the curriculum for the annual Python programming workshop.

Glasgow University Tech Society

VICE PRESIDENT (TILL MARCH 2020) AND ADVISORY TO THE BOARD   *Nov 2019 - Jan 2021*

- GUTS is the main society for the school of computing science at the University of Glasgow and mainly focuses on organising large scale events.
- Led organisation of events attended by hundreds of students such as the "Do you have the GUTS" hackathon and the Cyber Defence Exercise.
- Headed the Glasgow University Developer's Group Hub for the "Google Hash Code" competition attended by over 50 people.

Skills

Technical	• Network protocols • Systems programming • Concurrency • Distributed systems • CI/CD
Programming	• Java • Kotlin • Rust • TypeScript • Python • React • AWS • Docker • Kubernetes
Natural Languages	• English - fluent • Russian - fluent