

ILIA MIROSLAVOV MANOLOV

Software Engineer

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EXPERIENCE

Software Engineer - Market Data

Citadel Securities 📍 London, UK 📅 Aug 2021 – Present

- Lead the company's Market Data efforts to begin trading on a new exchange in the Middle East by communicating with the exchange and testing the connections with Python scripts.
- Maintain a core legacy C++ tool for determining prices of symbols used for risk calculations.
- Created a utility for efficiently filtering network captures per exchange and per trading symbol using Python and C++.
- Standardised the use of clangd as a C++ IntelliSense engine across the company by developing a tool that parses the Bazel build system configuration and creates a database that can be used by standard C++ LSP implementations.
- Extensive work on standardising the infrastructure stack to build under clang and assist with setting up the CI jobs for multiple compilation targets.
- Worked on a chat bot dictionary for financial and internal terms that integrates with Slack and Microsoft 365 Acronyms.

Software Engineering Intern

VMWare 📍 Sofia, Bulgaria 📅 July 2020 – Sept 2020

Topic: Fuzzing the Linux kernel inside a VM with syzkaller

Software Engineering Intern

Skyscanner 📍 London, UK 📅 July 2019 – Sept 2019

Topic: Java + Apache Spark flight search backend optimisation

Software Engineering Intern

Skyscanner 📍 Sofia, Bulgaria 📅 July 2018 – Sept 2018

Topic: Invalid flight quote frontend in React/Redux and NodeJS

TECHNICAL SKILLS

- Programming languages: C++, C#, Python, Javascript/Typescript ES6, Haskell, Scala, Java, Go and Bash
- High-performance compute: Apache Spark, AWS Batch and ECS, Azure Cognitive Services, TensorFlow, Jupyter Notebooks
- Webdev: ReactJS, Redux, NodeJS, CSS
- Version control: GitHub and GitLab
- Multimedia frameworks: Unity3D, SFML, SDL
- Microprocessor dev: Raspberry Pi, Arduino Uno and the AT90USB82
- Markup: HTML, XML, \LaTeX

EDUCATION

MSc in Computer Science

University of Oxford 📅 Oct 2017 – June 2021

Completed courses:

- 1st year - Functional and Imperative Programming; Digital Systems; Probability; Linear Algebra; Continuous and Discrete Mathematics;
- 2nd year - Algorithms; Models of Computation; Compilers; Concurrent Programming; Architecture; Graphics; Databases; Computer Networks; Concurrency;
- 3rd year - Artificial Intelligence; Geometric Modelling; Computer Security; Principles of Programming Languages; Computer-Aided Formal Verification;
- 4th year - Physically-based Rendering; Concurrent Algorithms and Data Structures; Database System Implementation; Advanced Security; Probabilistic Model Checking;

Projects:

- Group Project - Overlaying financial data in AR
- Bachelor's Thesis - Manipulating Constructive Solid Geometries in Virtual Reality
- Master's Thesis - Optimally implementing concurrent algorithms using GPGPU compute

Mathematics High School "Akad. Kiril Popov"

📅 Sept 2009 – Jun 2017

- Competed in National Olympiads in Informatics and was a member of the Senior Bulgarian International Team in Informatics in 2016.

LANGUAGES

English	Fluent (Cambridge Advanced A)
Bulgarian	Native
Russian	B1 (High School Grade A)
Japanese	N4 / A2 (Oxford Language Centre)

MISC. INTERESTS

- Technical Director of OxfordHack 2020 – Created and maintained oxfordhack.co.uk and deployed the internal registraton system.
- Oxford CompSoc Learn To Code – Main lecturer for the computing society annual beginner Python course
- Participated in [multiple Hackathons](#), [Game Jams](#) and [Algorithmic Challenges](#)
- Member of Experience Archery in London and ex-Member of the Oxford University Archery team