

ROBERT SZAFARCZYK

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EDUCATION

University of Glasgow 2021 - present
Computing Science, PhD

- Acceleration of legacy scientific code using source-to-source compilation for FPGAs.

University of Liverpool 2017 - 2021
Computer Science with a Year in Industry, BSc with Honours (Class I)

- Dissertation on Accelerating Biological Sequence Alignment with a GPU using CUDA.

EXPERIENCE

Intel, Swindon July 2019 - August 2020
Wireless Software Engineer Intern

- Part of an R&D team investigating future Intel architectures for 5G Layer 1 algorithms.
- Worked on a Low-density parity-check code (LDPC) kernel for a dataflow architecture.
- Worked on a Maximum-likelihood detection (MLD) tree search kernel for a dataflow architecture.
- Worked on an FFT kernel targeting a future Advanced Matrix Extension (AMX).
- Worked on tools: Python assembly generator for the dataflow architecture, C++ AMX emulation library.
- Technical presentation to an internal hardware team, and external technical teams.
- Designed, developed and maintained a Web App offering easier access to Intel's code profiling tools.

Bosch Service Solutions, Liverpool October 2017 - June 2019
Technical Support for a smart thermostat for Germany and the UK

- Worked 25-30 hours per week whilst completing undergraduate degree.

TEACHING

University of Glasgow 2021 - 2022
Graduate Teaching Assistant for Functional Programming (COMPSCI4021)

University of Liverpool 2020 - 2021
Student Demonstrator for Fundamentals of Computer Science (COMP109)

SKILLS

Programming	C++, C, SYCL, CUDA, MPI, Haskell, Python, Java, JS/HTML/CS, SQL.
Group Projects	Facial emotion recognition App, using a DNN (University group project). Map of unemployment with search filters (at Code for Good hackathon).
Spoken languages	Fluent in English, German and Polish.