

# ROBERT SZAFARCZYK

github.com/robertszafa ◇ robertszafa.github.io

## EDUCATION

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**University of Glasgow**

2021 - present

*Computing Science, PhD*

- Compilation of irregular codes to elastic dataflow architectures.

**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

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**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

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**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

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**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.