

EDUCATION

2020 – present	University of Cambridge, St. Catharine's College Engineering, 4 th year student Class I BA (rank 40 of 277 in Year 3) Studying for MEng in Aerospace and Aerothermal Engineering (modules incl. Computer Systems and Algorithms & Data Structures)
2018 – 2020	Richard Huish College, Taunton (A-Levels) Mathematics (A*) Computer Science (A*) Physics (A*) Further Mathematics (A*)
2013 – 2018	Bishop Fox's School, Taunton (GCSEs) 7 Grade 9s (incl. Mathematics, Physics, Computer Science, and English Language)

WORK EXPERIENCE

Siemens Cambridge Software Internship | 2023 | C++, Rust (WASM), TypeScript

- 12-week summer internship at Cambridge office;
- Contributed to Siemens NX C++ codebase;
- Worked with dev tools team:
 - Wrote VSCode extensions;
 - Implemented asynchronous client-server system in Rust using WebSockets.

PROJECT EXPERIENCE

4th year Engineering Project | 2023, ongoing | Python

- Individual project for MEng;
- Modelling of 1-D thermoacoustics networks:
 - Ongoing design challenge involving thermodynamics problem;
 - Involves constructing system as linear algebra problem;
 - Using `numpy` Python library to solve system.

2nd year Engineering Robot Project | 2021 | Arduino C++ | github.com/pylasnier/idp205

- Software lead of six-person team group project to design an autonomous robot;
- Task involved navigation within an arena to search and collect small dummies;
- Developed an understanding of the limitations of microcontrollers and how to work around them, especially memory constraints;
- Learnt alternatives for debugging a microcontroller system when breakpoints, watches, and other debugging features are not available.

A-Level Computer Science NEA | 2019 – 2020 | C# | github.com/pylasnier/functional-studio

- Designed an explicitly simply typed pure functional programming language, featuring:
 - functions as first-class citizens and higher-order functions,
 - selection and recursion,
 - a basic type system including integers, floats, and bools (arrays are possible as indexing functions, but no polymorphism or type constructors other than function types);
 - Developed an intermediate representation (IR) that implements this language;
 - Built a translator, including a tokeniser and a parser that produce the described IR, featuring a rich error system including type checking;
 - Packaged the whole interpreter with a simple IDE built using Windows Forms.
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ACTIVITIES AND INTERESTS

Languages	English (native), French (proficient, GCSE Grade 9)
Computing	Linux user, command line-confident Programming: C(++), C#, Python
Music	ABRSM Grade 6 Piano (Merit) ABRSM Grade 5 Music Theory (Merit)
Sports	Badminton (University Development Squad and college captain) Olympic-style Weightlifting
Extra-curricular	Duke of Edinburgh Award: Bronze (2019), Gold (ongoing) Volunteer at local library (Taunton)

Referees available on request