Pascal Lasnier

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EDUCATION

2020 — present **University of Cambridge, St. Catharine's College**
BA (Hons) and MEng Engineering, 3rd year student
Years 1 and 2: 1st (76% in Year 2)
Studying for Aerospace and Aerothermal Engineering

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)

PROGRAMMING EXPERIENCE

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

- Lead software component 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 for the limitations of microcontrollers and how to work around them, especially in memory;
- 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.

ACTIVITIES AND INTERESTS

Languages English (native), French (proficient, GCSE Grade 9), Japanese (beginner)

Computing Linux user, command line-confident
Programming: C(++), C#, Python

Music ABRSM Grade 6 Piano (Merit)
ABRSM Grade 5 Music Theory (Merit)

Sports Badminton, Olympic-style Weightlifting, Aikido (Brown belt)

Extra-curricular Duke of Edinburgh Award: Bronze (2019), Gold (ongoing)
Volunteer at local library (Taunton)

Referees available on request