

# LIAM L. H. LAU

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📍 Cambridge ♦ UK

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## EDUCATION

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### University of Cambridge, Gonville and Caius College

2017 - 2020

B.A. Natural Sciences (Physics) with an Optional 4th Year

First-Class in Maths and Physics. 2.i in Chemistry and Materials.

176 out of 619 candidates for IA Natural Sciences.

### Westcliff High School for Boys

2010 - 2017

4A\*in A level Physics, Maths, Further Maths & Chemistry (2017)

12A\*, 1 A in GCSE's. A\*'s including: English, Maths, Chinese & Physics (2015)

A in Free-Standing Mathematics Qualification (Additional Maths OCR) (2015)

### Awards

Silver Medal at the British Physics Olympiad (2016)

Gold Award for the Cambridge Chemistry Challenge (2016)

University of Cambridge Senior Physics Challenge (2016)

10th Nationally in the FMSP Year 10 Team Maths Challenge (2014)

## EXPERIENCE

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### Summer Project in the SMF Group

July - August 2018

*Summer Intern*

📍 *Cavendish Laboratories*

- Coded a short simulation to solve a partial differential equation with a finite difference method.
- Simulated electron trajectories in the ioniser of the Scanning Helium Atom Microscope (SHeM) using COMSOL.
- Tested peltier modules in vacuum and coded the sample cooling and sample heating programs in MATLAB.
- Wrote a short report on sample temperature control, including a short literature review on the surface microscopy of chocolate.

### Summer Project in the Photonics Academy of Wales

July - Aug 2016

*Summer Student*

📍 *Bangor, Wales*

- Designed and made an automated system which copies the motion of a control trolley using digital electronics and lasers.

### Part-time Kumon Tutor

2015 - 2017

*Mathematics Tutor*

📍 *Westcliff-on-Sea, UK*

- Taught children of ages between 4 and 16, multitasking between marking class work and helping students.

### The Samaritans Hong Kong

2015

*Summer Intern*

📍 *Hong Kong*

- Promoted the Darkness into Light annual event, which has 180,000 participants each year.

## PROGRAMMING SKILLS

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C/C++, Python, Bash, Linux/Unix  
Matlab  
Git, MySQL,  $\text{\LaTeX}$ , HTML, CSS, PHP

Working Proficiency  
Familiar  
Basic

## LANGUAGES

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English  
Cantonese  
Mandarin

Native Speaker  
Limited Working Proficiency  
Basic

## EXTRA-CURRICULAR

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### Workshops and Events Attended

- **J. P. Morgan – Introduction to Data Science and Machine Learning in Python** - (*Oct 2018*)
- **AI Hack** – 3rd Place Genome Wide Association Study Project on using logistic regression with single-nucleotide polymorphism data to determine significant SNPs associated with coronary artery disease. A link to our paper on our methodology can be found on my Github. (*Nov 2018*)
- **Oxford Hack** – Starting a joint project on a dynamic, smart student calendar. This is still under development, so if you have any queries, please send them to my email *lhll2@cam.ac.uk* (*Nov 2018*)

### Captain of the Gonville and Caius Basketball Team

2017 - Present

- Organise and run weekly practices for the team to compete in the Cambridge College league. We recently went undefeated in our division in the first term.

### Personal Projects

- Ongoing joint project on investigating new methods of aerospace power generation, particularly focusing on using the radiation bands around planetary bodies.
- Ongoing joint project on a dynamic, smart student scheduler which links to Google Calendar.
- Personal résumé website.
- Simulation of orbits using numerical methods.

### Duke of Edinburgh Award: Bronze, Silver

- Volunteering experience including interacting with disabled individuals at Essex's Disability Inclusion Society.
- This involved collaborative projects to revamp public spaces, such as planting a visual garden for Basildon Hospital.

### Piano

2008 - Present

- Continuation to Grade 7. Especially enjoy playing pieces from the Romantic period.

### STEM Ambassador

- Currently the second year representative for the Cambridge University Physics Society. I'm also a STEM ambassador.

## REFERENCES

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References are available on request.