## Philip Labrum

## Dual Citizenship US & UK |

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#### **Education**

#### HARVARD UNIVERSITY

Cambridge, MA

(Leave of Absence, Fall 2020) Expected graduat

**Expected graduation date: December 2021** 

A.B. Honours Candidate in Computer Science (Mind Brain Behaviour track), Minor in Physics. GPA 3.5

Relevant Coursework: Datasets and Algorithms, Computer Graphics, Engineering Quantum Mechanics, Statistics, Linear Algebra

# HBX | HARVARD BUSINESS SCHOOL

June 2020 - August 2020

Credential of readiness in Business Analytics, Economics for Managers, and Financial Accounting.

ETON COLLEGE

Windsor, England

Awarded 11 A\* at GCSE. A Level Results: Maths: A, Chemistry: A, Physics: B

**September 2012 – July 2017** 

Winner of the Mosely prize for Physics research, Head of Theatre, House Captain, Head of the Astronomy Society.

## **Projects**

**Human Connectome Project (Thesis):** Using association matrices from the HCP S1200 dataset, I will be using a canonical correlation analysis to pair fMRI brain activity with the National Institute of Health (NIH) cognitive toolbox results, thereby highlighting the inherent brain network activity associated with symptoms of mental health.

**Quantum Machine Learning**: Using Qiskit and Pyquil we built a distance-based classifier and ran it on both IBM and Rigetti quantum computers, with the goal of comparing results across the hardware [2019].

#### **Experience**

## THE CODING SCHOOL (Qubit by Qubit)

Cambridge, MA

Teaching Assistant

September 2020 – Present

- Currently responsible for 3 lab sections in a 7500 student virtual class on Quantum Computing backed by IBM.
- Each lab section ranges from 50 400 students, with abilities ranging from high school level to graduate students.

### **QUANTUM COMPUTING COLLABORATION**

Cambridge, MA

Co-Director

January 2020 – Present

• Started a joint-university project group with team-members at Harvard, MIT, EPFL, and UC Davis. We launched a virtual talk series on the applications of quantum computing. Starting with the Finance sector with guests from JP Morgan Chase, Goldman Sachs, and the MIT Faculty.

#### SHEPHERD THERAPEUTICS

Boston, MA

### Computational Research Consultant

May 2019 - August 2019

- Designed and built a Django based web-app that allowed the lab team to upload in-vitro drug results to an AWS instance and receive automated efficacy predictions from a machine learning analysis.
- Performed a mapping analysis connecting the clue.io gene expression dataset, to the Broad Institute genetic oncogene dataset. This provided a ranking highlighting the most promising drug candidates across multiple rare cancers.

#### RP INTERNATIONAL

London, England

Researcher

May 2018 – July 2018

- Worked in the telecommunications sector and with SaaS CRM companies to source technical specialists for international projects.
- Used CRM database analytics to identify high sector turnover rates and therefore identify future projects and clients.

## **Leadership and Activities**

Vice-President at the Harvard Quantum Computing Association

Cambridge, MA December 2019 – Present

- Led QCA's education program, teaching introductory computer science, quantum mechanics and quantum algorithms.
- Started the QCA project initiative using resources from corporate sponsors (IBM and Rigetti).

# **Senior Counsellor** for Youth Lead the Change (YLC)

Cambridge, MA January 2019 – Present

• Instructed high school students about leadership skills and social change projects over four conferences in New Delhi, India and Boston MA.

#### **Cadet Sargent** in the Combined Cadet Force (Royal Air Force)

England & Cyprus July 2016 – July 2017

• Trained with Princess of Wales' Royal Regiment in Dhekelia and the 34<sup>th</sup> Squadron in RAF Akrotiri. Received Gold Colonel H. Jones award for leadership.

#### **Skills**

Programming Languages: Python, C, Javascript, HTML/CSS, SQL, MATLAB, OCaml.

Software: Django, Flask, Heroku, QisKit, pyQuil, Solidworks, Fusion 360.