

Alastair Flynn

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EDUCATION

University of Oxford, Somerville College, MCompSci Computer Science: 2017 – 2021

- 4th year exams results – Distinction; 3rd year exam results - 1st class
- Shaw Lefevre Scholar in Computer Science
 - Awarded for high 1st class result in 2nd year
- Masters dissertation under Samson Abramsky on implementing category theoretic concepts in Haskell
- Major project in machine learning, specifically inductive logic programming¹ (distinction)
 - Used Python to train general game playing agents
 - Compared agents' performances when trained on random and intelligent gameplay
- Courses completed: Computer Aided Formal Verification; Compilers; Concurrent Programming; Logic and Proof; Lambda Calculus; Functional Programming (Haskell); Imperative Programming (OOP, Scala); Databases; Computer Architecture; Quantum Information; Concurrency; Design and Analysis of Algorithms; Algorithms; Knowledge Representation and Reasoning; Models of Computation; Principles of Programming Languages; Probability; Computer Security; Quantum Processes And Computation – Building quantum theory with process diagrams; Categorical Quantum Mechanics – Using category theory to describe quantum mechanics; Categories, Proofs and Processes; Concurrent Algorithms and Data Structures; Requirements – Understanding the Requirements Capture and Analysis phase of software development

Minster School Southwell, Nottingham: 2010 – 2017

- A Levels: Maths A*, Further Maths A*, Computer Science A, Physics A
- GCSEs: 6 A*s (including Maths), 5 As (including English), 1 B

EXPERIENCE

Canonical, Software Engineer 2022: Present

- Lead developer of SQLair (<https://github.com/canonical/sqlair>)

NUCO Travel, Representative: Winter 2021

- Interacted with, and looked after customers to ensure they get the most out of their ski holiday
- Sold upgrades to ski packages

Oxford Scholastica Academy, Activities Coordinator: 3 weeks July 2021

- Organized and ran activities for 12-18 year olds on the summer school
- Identified issues and ensured everyone was making friends and having a good time

Infosys, Instep Software Engineering Intern, Remote: July – Sept 2020

¹ <https://arxiv.org/abs/2008.01664>

- Worked on a facial recognition system using quantum machine learning
- Integrated quantum machine learning layers into Pytorch models using transfer learning with a pretrained classical model
- Constructed a range of variational quantum circuits based on academic papers using the Python PennyLane library to integrate with ML models

Metaswitch, Summer Intern, Edinburgh: July – Sept 2019

- Worked in an agile development team using the Rust language
- Conducted a security review of a large telecom solution
- Offered maximum bonus available for outstanding performance

Oxford University Orienteering Club IT Officer: 2019 – 2021

- Rebuilt the club website² (last redesigned pre 2000)
 - Wrote the new HTML from scratch
 - Used modern minimalist design principles to create a futureproof, stylish page

Somerville College IT Officer: June 2018 – Oct 2019

- Liaised with college management over students' IT concerns
- Maintained the college website and provided IT support to students

Modux, Micro Intern, Bristol: 1 week 2018

- Built a cyber honeypot to collect information about malicious agents

OTHER

- Gold DofE award
- Grade 8 piano – achieved whilst in 3rd year of university
- College ambassador – duties include:
 - Giving tours to groups of prospective students
 - Visiting schools and talking to students about Oxbridge
- Computer Science ambassador – duties include:
 - Helping at open days
 - Assisting in running events such as the UK Bebras computational thinking challenge
- Computer Science practical demonstrator – duties include:
 - Helping students understand course material
 - Evaluating their understanding of the practical tasks
- Keen runner and orienteer; love the outdoors; volunteer with Oxford Conservation Volunteers

² <http://ouoc.org.uk/>