





Ryan T Gibb

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EDUCATION


UNIVERSITY OF CAMBRIDGE 2021 - 2022

MPHIL IN ADVANCED COMPUTER SCIENCE

- Specialising in Computer Systems.

UNIVERSITY OF ST ANDREWS 2017 - 2021

BSc HONS COMPUTER SCIENCE

- 1st Class Honours.
- Dissertation: 'Ubiquitous Communication for the Internet of Things'  2020
- John Honey Prize.
- **Best student in the Junior Honours (3rd) year.**
- Christopher Strachey Prize. 2019
- Best student in the core module of data structures and algorithms.
- Dean's List Award for exemplary academic achievement in every year.

NORTH BERWICK HIGH SCHOOL 2011 - 2017

- School prize for highest achievement in AH Maths, AH Computing Science, Higher Maths, and Higher Computing Science.

WORK EXPERIENCE

CISCO June - Sep 2021

SOFTWARE ENGINEER INTERN

- Working on [Cisco Defense Orchestrator](#).
- "Key contributor on a project to re-architect [the] MongoDB multi-tenancy solution."
- Made [contributions](#) to the Spring Data MongoDB project.
- Overhauled the error handling for an Angular front end microapp.

UNIVERSITY OF ST. ANDREWS Jun - Aug 2020

UNDERGRADUATE RESEARCH ASSISTANT

- Designed, implemented, and benchmarked multi-core and cache efficient algorithms for high degree permutations in C and Rust.
- Resulted in a 64% faster parallelised algorithm for degrees of 2^{32} .

JP MORGAN CHASE & CO. Jun - Aug 2019 (10 weeks)

SOFTWARE ENGINEER INTERN

- Created a Message Recovery Service for an OTC Derivatives System.
- Used Spring, React, and Typescript; deployed on Cloud Foundry.
- Resulted in trade status update auditability and saved developer time.

POSITIONS OF LEADERSHIP

COMPUTER SCIENCE SCHOOL PRESIDENT Jul 2020 - Jul 2021

- Ran a remote orientation week collaborating with the school and societies.
- Created a school-wide mentorship scheme with over 200 participants.
- Line managed 11 class reps.
- Chaired semesterly Student-Staff Consultative Committee meetings.

STACS TREASURER May 2019 - May 2020

- Responsible for St. Andrews Computing Society's finances (~£15k).
- Point of contact with sponsors for coordinating events.
- Organised 2 hackathons 'Hack the Bubble' and 'StacsHack'.

2ND YEAR CLASS REP Sep 2018 - May 2019

- Represented my year in conjunction with the faculty and school president.
- Organised year wide social events.

SKILLS

- Computer systems
- Computer networking
- Operating systems
- Distributed systems
- Unix shell
- **git**
- **vim**
- Data structures and algorithms
- Agile, Scrum, Jira, Jenkins
- C, Python, Java, SQL, Rust, Haskell, C#, \LaTeX , Javascript (Node.js, React.js, Angular.js)

COMPETITIONS

STACSHACK V 2019

- Created a tweet guessing web game 'Twitcher' in 24 hours using a Node.js backend interfacing with twitter's API.
- Won American Express's 'icebreaker challenge'.

HACK THE BURGH V 2019

- Created a text-to-speech and speech-to-text web app phone system 'HearMe' for the hearing-impaired in 24 hours.
- Using React.js and Node.js.
- Won JP Morgan's 'empowering minority entrepreneurs' award.

PROJECTS

COLOUR SPACE COMPRESSION Java

- Uses the K-means clustering algorithm to compress the number of colours in an image.

IMAGE STEGANOGRAPHY Python

- Hides data (plaintext, images, or other files) in the least significant RGB bits of pixels in an image.

REFERENCES

Available on request.