Isaac Holt

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Summary

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Education

Durham University, MMath Mathematics   09/2021 – Present

- Predicted 1st (average mark 90%).

Colchester Royal Grammar School   09/2019 – 06/2021

- A Levels: Mathematics (A*), Further Mathematics (A*), Physics (A*), Latin (A*).
- Awards: Year 13 Prize for Further Mathematics.

Research Experience

Research Project in Tropical Geometry   06/2023 – 07/2023

Durham University

- Area of research was how the tropical modification of certain polynomial systems can be used to determine the generic root count.
- The results of our work are expected to be published as a paper at the end of this year.
- Attended a working group in Germany relating to this research, to write code for the OSCAR computer algebra system.

Work Experience

Web and Communications Internship   07/2023 – 08/2023

Grey College, Durham University

- Created a new website for Grey College Senior Common Room, using React, Next.js, Bootstrap, and KV storage.
- Built an admin dashboard with an email client for sending markdown emails and template emails.
- Developed a password-less email authentication system for the dashboard.

Student Digital Leader   09/2022 – 06/2023

Durham University

- For the first few weeks, I worked in online support with the university's digital services for the new students.
- I then worked as a UAT (User Acceptance Testing) Analyst within this role, using Azure DevOps and Jira to pass/fail test cases and report bugs for a new website that the university is launching.

Software Tester   01/2021 – 03/2021

Blutick

- Tested Blutick's marking software for online GCSE maths exams, reported bugs I found when using the website.
- Given the responsibility of editing the online questions and mark schemes myself using Latex.
- Developed TypeScript program to generate all solutions for questions where many combinations of answers were allowed.

Projects

bnum   05/2021 – Present

Rust library with over 150,000 downloads that provides fixed size signed and unsigned integer types, designed to extend the functionality of Rust's primitive integer types to arbitrary bit sizes. I am currently developing a floating point type that similarly will extend the functionality of Rust's floating point types to arbitrary bit sizes.

Extracurriculars

Piano (Grade 8 Distinction) | Grey College Table Tennis A Team | Grey College Badminton B Team | Durham University Chess Society | Durham University Quant Fund | Co-leader of Physics and Maths Society at sixth form

Skills

Mathematics | Rust | Python | Latex