

Calliope Ryan-Smith

Curriculum Vitae

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GitHub github.com/calliope1

Profile

Aspiring software engineer with a PhD in mathematical logic. Proficient in Python, C#, JavaScript, SQL and HTML/CSS. Strong analytical thinker with a passion for programming and problem-solving. Experienced in teaching and technical communication.

Technical skills

Languages: Python (proficient), \LaTeX (advanced), C#, SQL, HTML, JavaScript, PHP, MATLAB.

Mathematics: Algorithms, logic, graph theory, combinatorics.

Adaptability: Quick to learn new skills and technologies.

Technical projects

[GitHub](#)

BrickBot

Discord server bot written in Python that uses event-driven logic to interact with server users.

Inventory optimiser

Python code for trying to efficiently obtain stacks of certain sizes in Minecraft. Calculates optimal methods by number of clicks and produces a visualisation of this result using Matplotlib.

calliope.mx

Personal academic website on a LAMP stack that provides information on my talks and papers.

Education

PhD in Mathematical logic (in progress)	University of Leeds	<i>Oct 2021–Aug 2025.</i>
MMath, Mathematics (Distinction)	University of Cambridge	<i>Oct 2020–Jun 2021.</i>
BA, Mathematics (2:1)	University of Cambridge	<i>Oct 2017–Jun 2020.</i>

Experience

Workshop leader (University of Leeds) *Oct 2021–Jun 2025.*

Led undergraduate workshops and marking for students in a variety of technical subjects.

Research intern—Differential Galois Theory (University of Cambridge) *Jun–Jul 2019.*

Collaborated with faculty on mathematical research. Produced a report and presented findings to peers.

Research intern—Ethics in Mathematics (University of Cambridge) *Jun–Jul 2018.*

Conducted collaborative qualitative research in a small team (approx. 10).

Transferable skills

Communication: 30+ talks to diverse audiences; eight research papers both solo- and co-authored.

Collaboration: Organised academic events in small teams; experience in shared research.

Teaching: Led undergraduate workshops for four years; experience explaining advanced topics to non-experts.

Organisation: Organised seminars and research conferences; self-managed long-term research projects.