

Leyna May

✉ leynamay@gmail.com | 🌐 leynamay.com | in [linkedin.com/in/leyna-may](https://www.linkedin.com/in/leyna-may) | 🐙 github.com/LeynaM

SUMMARY

I am currently completing a PhD in algebraic topology. Alongside my research and teaching, I got involved with the community by running the research group's seminar series for two years, organising the British Topology conference, and delivering my own seminar talks. I have also helped to run local Women in Tech coding workshops. Recently, I've enjoyed working on personal projects, combining my knowledge of mathematics and programming to create 3D physics games and simulations. I am now excited to apply my expertise and love of learning to software development roles.

EDUCATION

University of Sheffield <i>PhD in Mathematics. Thesis 'Hidden Symmetries, Trees and Operads'</i>	2025
Durham University <i>Masters in Mathematics, First class honours. Thesis 'Morse Theory: Morse-Bott Functions and Homology'</i>	2020

EXPERIENCE

Graduate teacher <i>University of Sheffield</i> <ul style="list-style-type: none">• Taught Python and R to undergraduate engineering students• Led tutorials for undergraduate mathematics and engineering students• Marked undergraduate examinations and assessments• Developed skills in reviewing and debugging other people's code, giving constructive feedback and communicating technical concepts clearly	2021 – Present
Project supervisor <i>University of Sheffield</i> <ul style="list-style-type: none">• Supervised a UKRI funded undergraduate student summer project on the topic of knot theory	June - July 2023

PROJECTS

Tilt Game <i>JavaScript, Three.js, HTML, CSS</i> <ul style="list-style-type: none">• Developed a physics-based browser game with ball movement, tilting platform mechanics, and collision detection using Three.js• Implemented my own physics algorithms to simulate the ball's motion• Added mouse controls to allow a player to adjust the tilt of the platform, with the aim of reaching the target square and avoiding holes in the platform• Project can be found at leynamay.com/tilt-game and on GitHub at github.com/LeynaM/tilt-game	January 2025
Bouncing Ball <i>JavaScript, p5.js, CSS</i> <ul style="list-style-type: none">• Developed a physics simulation of a bouncing ball with adjustable gravity and slope parameters using p5.js• Implemented realistic physics mechanics, including collision detection, velocity, and acceleration• Project can be found at leynamay.com/ball-on-slope and on GitHub at github.com/LeynaM/ball-on-slope	December 2024

PUBLICATIONS

Quartic graphs which are Bakry-Émery curvature sharp <i>Python</i> <ul style="list-style-type: none">• Published in Discrete Mathematics, Volume 343, Issue 3 (https://doi.org/10.1016/j.disc.2019.111767)• Wrote a recursive algorithm using Python to generate local configurations of graphs with certain curvature properties	March 2020
--	------------

SKILLS

Programming Languages: Python, JavaScript, HTML/CSS, R
Tools: Git, Linux, LaTeX
Languages: English (Fluent), German (B1)