Aaron Huntley

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SUMMARY

I am a graduate mathematics student currently studying a masters course at Western University. I am interested in Category Theory, Topology and Abstract algebra.

EDUCATION

Western University

– MSc, Mathematics, ongoing

University of Leeds

- Mmath, Mathematics, Class I
- BSc, Mathematics, Class I

King Edwards VI College, Stourbridge

- Mathematics and further mathematics Grade A,B
- Computer science Grade B
- Geography Grade C

Projects

Final year project

Definitions of categorical concepts including: categories, functors, natural transformations, adjunctions, monads and 2-categories. Worked examples such as: the category of monoids, free and forgetful functors, the powerset monad.

Third year project

The symmetry of every repeating, plane filling, tiling can be completely be described by one of 17 different symmetry groups called wallpaper groups. Includes proof of theorems leading up to the crystallographic restriction theorem with worked examples. Applications to real world patterns such as Escher's paintings. Extension of the theory to hyperbolic geometry; theory of crystallographic groups on the Poincaré disc. Presented ideas in a 15 minute presentation to peers and tutors with question and answer. Defended paper in an interview with supervisor and moderator.

Skills

- Fluent in Python
- Novice in Portuguese

Symmetries of Escher's paintings

Introduction to category theory

Sept 2023 - Present

Sept 2019 - Jul 2023

Sept 2017 - Jul 2019