# Brice Arrigo

#### Mathematics Honours Graduate

#### GitHub in LinkedIn

I am a pure mathematician, interested in enumerative combinatorics. I completed my honours degree in June 2024. During my studies I cultivated my passion for mathematics, and now seek to apply it to real world problems. In my career, I desire to be constantly challenged with interesting problems and be surrounded by talented people.

## **EDUCATION**

# **The University of Melbourne** Master of Science (Maths and Stats)

June - 2025

• Beginning my Masters in semester two of 2025.

# **Monash University ►** Bachelor of Science (Honours)

2023-2024

- Completed research under supervision of Norman Do. Completed coursework units of algebraic topology, differential geometry, geometric group theory, measure theory, and representation theory.
- My thesis introduced a new family of deformations of monotone Hurwitz numbers. This required me to independently learn many new areas of maths, which are not covered in any undergraduate or graduate training.
- Currently writing a paper related to my thesis with my supervisor.

## **Monash University ►** Bachelor of Science Extended Major in Pure Mathematics

2020-2023

- Completed maths units covering a wide range of disciplines. Abstract algebra (groups/rings/fields), topology (pointset/algebraic/low-dimensional), differential geometry, analysis (real/complex/functional), probability and mathematical statistics.
- Completed group projects for maths, computer science and science communications units. These units enhanced my solo studies as I gained a better understanding by needing to clearly explain concepts to fellow students.

## **EXPERIENCE**

## Freelance Writer | Freelance

2025-Present

• Currently working as a freelancer for Oxford University Press. Reviewing all LaTeX for year 7, 8, 9 and 10 textbooks and creating answer templates for QCE physics, chemistry, biology, and psychology.

## **Teaching Associate** Monash University

2024

• Supported the School of Mathematics in the Mathematics Learning Center.

# **Deloitte Summer Vacation Program** Data and AI - Computer Vision

Jan-Feb 2024

- I was on a team within Deloitte's Data and AI department called the CV-Crew, within that team I was on a project related to providing a computer vision solution to a customer who needed to detect license plates of vehicles which were speeding on their premises.
- I cleaned up provided training data for our model, labelled bounding boxes using AWS SageMaker Ground Truth, and partitioned data into test/train/val sets. I also gained experience with AWS services such as EC2 and S3.
- During this I gained experience with important Python libraries for computer vision, such as open-cv, Pillow, TensorFlow and Keras.

## SKILLS

#### Programming </>

- Python/SageMath. Completed computer science units where the main language was Python. I've implemented algorithms from my research (cut-and-join style recursion for deformed monotone Hurwitz numbers) in python to collect large amounts of data for making conjectures. Experienced with numerical analysis.
- Git. Managed codebase for my honours research project with Git, creating and merging branches and resolving conflicts.
- · Proficient Excel for data extraction, transformation and modelling.
- Proficient with Power BI for Dashboarding and data visualisation

## Mathematics **m**

- My pure mathematics skills enable me to think analytically and quantitatively about problems.
- My mathematics training has enabled me to think abstractly and reduce new problems down to something I already know how to solve.
- I am experienced with applying my mathematical statistics training to data analytics.

## Communications

- I am proficient in communicating complex ideas to varying audiences.
- I have experience giving talks about my research.