

# Joseph Dobson

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## EDUCATION

### ETH Zürich

Zürich, Switzerland

*Mathematics Exchange*

2021-2022

- **Autumn:** Quantum Information Theory, Mathematical Data Science, Linear and Combinatorial Optimization.
- **Spring:** Quantum Information Processing, Machine Learning, Causality, Computational Statistics.
- First ever Durham University exchange at ETHZ and **Heyning Roelli Scholar**.

### Durham University, van Mildert College

Durham, UK

*MMath Mathematics, Predicted First*

2019-2023

- Current Grade: **71%**.
- **Relevant Courses:** Mathematical Physics, Monte Carlo Simulations, Probability, Modelling.

### Wymondham College State Boarding School

Norfolk, UK

- **A Levels:** Mathematics A\*, Further Mathematics A\*, Physics B, (AAAA AS-Level).
- **GCSEs:** 4A\*s, 7As.

## Skills

*Languages:* Native **English**, Fluent in **German (B2)**, Basic **Russian (A1)**, Basic **Spanish (A2)**.

*Programming:* Experienced with **Python**, **LaTeX**, **Git**, Learning **R**.

*Computing:* Comfortable using MacOS, Windows, and the Office Suite.

## PROJECTS

### SBB/ETH Polyhack 2021 – Python (Pandas, API's, Math), Git

- Built tool that recommends best reachable hike based on weather, feasibility, location, and difficulty.

### Thread Portrait Drawer – Python (Pillow, NumPy, Scikit-Image, Matplotlib), Git

- Coded single thread portrait drawing program, much like: <https://www.youtube.com/watch?v=XJRVqzoQUG0>.

### Modelling a suspension bridge – Python (NumPy, Matplotlib), LaTeX

- Modelled the relationship between forces applied to a suspension bridge and the bridges harmonic frequency.

### Advent of Code, Codeforces - Python

## Employment

### Zero Gravity, MyTutor – Mathematics Tutor, Academic Admissions Mentor

United Kingdom

- Mentoring disadvantaged students through admissions tests into world class universities.
- Tutoring Mathematics online and in-person.

March 2021-Present

### Gap Year Learning Languages – Sous Chef, Tour Guide

Munich, Germany; St Anton, Austria

- Sous Chef cooking up to 700 dishes a night and waitering in the busiest restaurant of St Anton.
- Learnt Fluent German in a professional environment.

2018-2019

## Leadership

### Van Mildert College Boat Club - Coach, COVID Officer

Durham, UK

- Organised sessions for college athletes and coaching them using my experience at DUBC.

Sep 2020 - Current

### Wymondham College - Major Cup House Captain, Maths Tutor and Mentor

Norfolk, UK

- Captained the interhouse Music competition to first place. Tutored and consulted maths students.

2016-2018

## Interests

*Music:* Self-taught musician writing and playing for bands on BBC Introducing and venues nationally.

*Sport:* Durham Development Rowing Squad after highly competitive 4-week trials (GBR High Performance Team).

Represented one of the best rowing universities in the UK. Dry Slope Skier, Runner, and Olympic Weightlifter.