

OLIVER SINGH

Personal Information

DATE OF BIRTH: 25th March 1995
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Experience

MAY. 2022 to Present	Evariste Technologies <i>Data Scientist</i> Evariste is a small drug discovery company which uses simulations, modelling, and machine learning to search virtual libraries of billions of drug-like molecules for candidates for drug development. My roles include working as a developer (using Python and SQL) and data scientist to develop and implement models, and also involves some data engineering to deploy these models.
JAN. 2021 to MAR. 2021	Max-Planck-Institut für Mathematik <i>Visiting Researcher</i> Visiting the mathematics research institute in Bonn, Germany, to carry out collaborative research in low-dimensional topology.
JUN. 2020 to DEC. 2020	Cabinet Office - COBR, COVID-19 Taskforce <i>Grade 7 - Senior Analyst, Data Scientist</i> Surge hire during the COVID-19 crisis. Initially working for CCS and COBR, I directly contributed to briefings for the prime minister, ministers, and senior officials on the status of the pandemic. From August I worked within the Covid-19 taskforce, and worked on and managed data science projects (primarily in Python). Throughout, I helped to run an intra-government COVID-19 dashboard, and designed and wrote a Python API used by analysts for the day to day running of the dashboard.

Education

OCT. 2017 to JUN. 2022	University of Durham <i>PhD in Mathematics</i> Research in Low dimensional topology, under the supervision of Dr. Andrew Lobb and Dr. Mark Powell. Funded by an EPSRC grant.
OCT. 2013 to JUN. 2017	University of Cambridge, Mathematical Tripos <i>BA with MMath, First Class + Distinction</i> Distinction in part III and first class in part II.
SEPT. 2011 to JUL. 2013	St. Aidan's & St. John Fisher Associated Sixth Form A-Levels in Mathematics A* , Further Mathematics A* and Physics A* . AS-Level Chemistry, A . STEP: Paper I S , Paper II S , Paper III 1 .

Papers

- NOV. 2021 | *Pseudo-isotopies and diffeomorphisms of 4-manifolds*, Preprint, arXiv:2111.15658.
- MAY 2019 | *Distances Between Surfaces in 4-Manifolds*, Journal of Topology, 13. 1034-1057.

Academic Talks

I have given talks on my research in person at the University of Geneva, the University of Sydney, the University of Cambridge, Durham University, and the Max Plank Institute for Mathematics. I have also given virtual talks for a number of geometry and topology seminars.

Skills

Experienced programming in Python, familiar with pandas, numpy, scikit-learn, some experience with pytorch, dask, and sqlalchemy. Experienced using Git. Beginner SQL. I am currently learning to use docker as we transition to AWS. Experienced working with Linux; I currently administer my company's linux server.