

OLIVER SINGH

Personal Information

DATE OF BIRTH: 25th March 1995
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Experience

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| 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

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| 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. Experience with SQL, I have set up and managed a large PostgreSQL database as part of my current role. I am currently learning to use docker as we transition to AWS. Experienced working with Linux; I currently administer my company's linux server.