

# Jay Sharma

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## EXPERIENCE

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### Software Developer, Bloomberg

*Software Engineering Core Data Commodities*

- Using Python, Flask, TypeScript, React, PSQl

September 2021 - Present

*London, UK*

### Data Engineer, RedOptima

*Machine Learning Research and Data Engineering*

- Researched and implemented cutting edge image segmentation/ computer vision related ML methods, primarily Neural Networks. New models greatly improved RO's ability to extract value from satellite imagery, and resulted in an improvement in prediction accuracy (F1 score) of over 200%
- Designed and deployed data pipelines using a combination of AWS services (S3 buckets, EC2 instances) and internal remote machines that were used as training and data processing servers
- Trained and evaluated ML models with Tensorflow. Integrated said models into the codebase and production
- Wrote well documented, scalable internal Python modules, for pre-processing data from a variety of sources, that remained efficient when scaling up from thousands to millions of images
- Experienced explaining technical results to stakeholders in an easily understandable and actionable way due to regularly presenting findings directly to the CEO and sales team

October 2020 - June 2021

*London, UK/ Remote*

### Data Scientist Intern, RedOptima

*Machine Learning and Data Analysis*

- Designed and implemented upgrades to a Convolutional Neural Network that expanded the number of features that RedOptima could extract from satellite imagery by 750%
- Performed analysis on and manipulated large GeoSpatial datasets using SQL (PostgreSQL) and Python

August 2020 - October 2020

*London, UK/ Remote*

### Tutoring

*GCSE and Year 7/8 Maths*

- Created study material and lesson plans to help students improve their test scores
- Developed strong interpersonal skills as a result of working with students and their parents

June 2018 - June 2020

*London, UK/ Remote*

## EDUCATION

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### University of Sussex

*MMath with Honours in Maths with Economics (2:1)*

- Masters Grade:** First Class. Modules included Financial Portfolio Analysis, Functional Analysis and Advanced Numerical Analysis.
- BSc Grade:** Upper Second Class (2:1) overall. Notable modules taken: Financial Mathematics, Cryptography, Perturbation Theory, Coding Theory, Real Analysis and Probability Models.

Brighton, UK

*September 2016 - June 2020*

### Tech City College

*GCE Advanced level (A levels)*

- Achieved:** A in Maths, B in Economics, C in Further Maths

London, UK

*September 2014 - May 2016*

### St Mary Magdalene Academy

*GCSE's*

- Achieved:** 10 A\*'s to A's, including A's in Mathematics, English and Science

London, UK

*September 2011 - May 2013*

## TECHNICAL SKILLS

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**Languages:** Python, SQL (Postgres), JavaScript, TypeScript

**Developer Tools:** Git, AWS, Linux, Jira, BitBucket

**Libraries/ Frameworks:** React, Flask, pandas, NumPy, Matplotlib, Tensorflow,

**Additional Skills:** Research, Deep Learning, Computer Vision, Agile methodologies, A/B Testing, OOP

## PROJECTS

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### Hidden Markov Model based Stock Market Predictor | *Python, Pandas, Numpy, Markov Models*

2020

- Programmed an application that utilises Python and machine learning algorithms, primarily Hidden Markov Models, to predict future stock prices. Amassed over 200 stars on github.
- Available at: [https://github.com/Jays-code-collection/HMMs\\_Stock\\_Market](https://github.com/Jays-code-collection/HMMs_Stock_Market)