

I am an experienced software engineer with a strong background in mathematics and probability/statistics. I excel at building performant, production grade solutions, particularly in the area of machine learning. I excel at the process of taking ideas/research and realizing them as full software solutions.

## Work Experience

<b>Machine Learning Engineer</b> Vice President	<b>BlackRock</b> London, UK	<b>Mar 2020 – Present</b>
<ul style="list-style-type: none"><li>• I develop and maintain production machine learning solutions in the alternative investments space, with a primary focus on NLP solutions.</li><li>• Leading a team of 4 engineers, delivering a product which has created large efficiency gains and directly affected annual contract value.</li><li>• Pioneered novel graph based transformer networks to users which saw significant improvements over older models in production - <a href="https://arxiv.org/abs/2202.09144">arxiv.org/abs/2202.09144</a></li><li>• Responsible for the full lifecycle of the product, from idea generation/research to CI/CD and maintenance.</li></ul>		
<b>Data Scientist</b>	<b>The Signal Group / OilX</b> London, UK	<b>Sep 2018 - Mar 2020</b>
<ul style="list-style-type: none"><li>• Built pricing ingestion for freight derivatives and algo-trading system for systematic trading in equities as part of a three-person team.</li><li>• Utilised disparate and novel data for signal generation and live trading.</li><li>• Built extensive web scraping and data extraction infrastructure from scratch for forecasting.</li><li>• Research and development for forecasting crude oil imports and exports from AIS, satellite and text data.</li></ul>		
<b>Jr. Data Scientist</b>	<b>Bloomberg</b> London, UK	<b>Jun 2016–Aug 2018</b>
<ul style="list-style-type: none"><li>• Data ETL with Spark/Hadoop and feature engineering to facilitate machine learning applications for the task of classification of company financial documents.</li><li>• Training and optimization of neural networks for document classification, with a precision of ~99% and recall of ~80%</li><li>• Development and maintenance of production grade ML systems.</li><li>• Developed internal API's to streamline data development processes, widely used within the team.</li></ul>		

## Education and Certifications

• <b>M.Sc. Financial Mathematics: Distinction</b> , King's College London	<b>2015–2016</b>
• <b>B.Sc. Mathematics: 2:1</b> , University College London	<b>2012–2015</b>
• <b>A-Levels: A*A*AA</b> , Barnard Castle School	<b>2001–2012</b>

## Key Skills and Competencies

- Python / numpy, pandas, tensorflow etc. / Azure / Unix / git / Rust / docker, k8s
- Strong mathematical background with background in probability, statistics and machine learning.
- Experienced in working with large codebases and in greenfield environments.
- Engineering people management.