

# LORENZO GABRIEL STIGLIANO

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## EDUCATION

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**University of Oxford** Oct 2025 - Oct 2029  
D.Phil. Machine Learning (Computational Biology) Oxford, UK

- Funded by the Engineering and Physical Sciences Research Council (EPSRC) CDT in Healthcare Data Science.
- **Modules:** Statistical Methods, Bayesian Machine Learning, Deep Learning, Research Methods, Ethics.

**Imperial College London** Oct 2022 - Oct 2023  
M.Sc. Computing (Artificial Intelligence & Machine Learning), Distinction (79%) London, UK

- **Dissertation:** Reproducible Knowledge Distillation for Graph Neural Networks
- **Modules:** Reinforcement Learning, Deep Learning, Computer Vision, Natural Language Processing.

**University of Edinburgh** Sep 2017 - Jun 2021  
B.Sc. Computer Science and Mathematics, First Class Honours (84%) Edinburgh, UK

- **Dissertation:** Introduction to Inverse Problems and Markov Chain Monte Carlo Methods
- **Modules:** Machine Learning, Statistics, Database Systems, Algorithms and Data Structures.

## WORK EXPERIENCE

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**Data Scientist** Sep 2023 - Sep 2025  
J.P. Morgan Chase & Co. London, UK

- Developed from scratch an end-to-end machine learning pipeline for rare event prediction, employing a comprehensive approach encompassing classification models and variational autoencoders.
- Optimized RAG pipelines using DSPy and LangChain, enabling cost-effective analysis of 1k+ transcripts per week with a 60% reduction in resource expenditure.
- Implemented data processing pipelines and back-testing frameworks for scalable prototyping using PySpark.
- Leveraged knowledge in Python (NumPy, Pandas, Scikit-Learn, PyTorch, SHAP), SQL, Git, Bash, Spark, MLFlow.

**Data Scientist Intern** Jun 2022 - Aug 2022  
J.P. Morgan Chase & Co. London, UK

- Spearheaded data analytics initiative exploring web data to extract actionable insight for 1M+ companies.
- Optimized ETL pipeline with improved throughput, scalability, and cost efficiency.
- Leveraged knowledge in Python (NumPy, Pandas, Matplotlib, SciPy, SQLAlchemy), SQL, Git, Bash, Spark.

**Software Engineer** Aug 2021 - Jun 2022  
Barclays Glasgow, UK

- Developed a full-stack web application to evaluate the impact of release changes on the current system.
- Implemented and optimized queuing systems reducing background processing run-times by 50%.
- Leveraged knowledge in Java (Spring), Javascript (React), Rest APIs, HTML/CSS, SQL, Git.

**Software Engineering Intern** Jul 2020 - Aug 2020  
Barclays Glasgow, UK

- Created an application to display client relations within the bank using AWS to reduce hosting costs by 90%.
- Leveraged knowledge in Java (Spring), AWS (EC2, RDS, Auto-Scaling), Salesforce API, Rest APIs.

**Software Engineering Intern** Jun 2019 - Jul 2019  
Imagination Technologies Kings Langley, UK

- Developed a full-stack app which eliminated the need for manual interactions with hardware emulator platforms.
- Leveraged knowledge in Python (Flask, SQLAlchemy), JavaScript, Rest APIs, HTML/CSS, Git, Confluence.

## ACADEMIC EXPERIENCE

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### Research Assistant

Apr 2023 - Sep 2023

Brain And Signal Research & Analysis lab, Imperial College London

London, UK

- Developed a novel one-to-many knowledge distillation algorithm for graph neural networks, achieving 95%  $\geq$  reduction in model parameters while maintaining performance in graph classification tasks.
- Algorithm reduced inference times by 90% on distilled models deployed on edge devices.
- Under the supervision of Dr. Islem Rekik.
- Leveraged knowledge in Python (PyTorch, PyTorch Geometric, NumPy), Git, Bash, and SLURM.

### Research Assistant

Jun 2020

Center for Speckled Computing, University of Edinburgh

Edinburgh, UK

- Researched potential causal links between biomarkers and PM2.5 exposure across diverse test groups, employing statistical tests.
- Identified significant differences in subjects exposed to second-hand smoke versus non-exposed individuals.
- Under the supervision of Prof. Damal Arvind.
- Leveraged knowledge in Python (Scikit-learn, NumPy, SciPy), Git and Bash.

## TEACHING

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- Foundations of Data Science (INFR08030), University of Edinburgh Spring 2021
- Introduction to Computation (INFR08025), University of Edinburgh Fall 2020
- Algorithms, Data Structures, Learning (INFR08009), University of Edinburgh Spring 2020

## AWARDS AND PRIZES

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- Fully Funded Doctoral Studentship EPSRC Center for Doctoral Training. Oct 2025
- University of Edinburgh Class Prize for Top Performance in Computer Science and Mathematics. May 2021
- King's College Class Prize for Mathematics, awarded for exceptional performance in mathematics. Jun 2017
- King's College Honorary Scholarship, awarded for outstanding performance at AS Level. Jun 2016

## SKILLS

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**Languages:** (Proficient) Python, Java, SQL, Bash (Familiar) R, Matlab.

**Technologies/Frameworks:** NumPy, Pandas, Scikit-Learn, PyTorch, PyTorch Geometric, PySpark, MLFlow.

**Software Development:** Git, Bitbucket, Databricks, Agile, Unit Testing, RESTful APIs, AWS.

**Spoken Languages:** English (fluent), Spanish (native), Italian (conversational).

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