

# Dr Georgios Giasemidis

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Blog: <https://giasemidis.github.io/>, Google Scholar: <https://bit.ly/3oBrDj0>

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## Work Experience

- Apr. 2022 – present **Lead Data Scientist**, *Choreograph, WPP*, London  
Data science and model building of complex systems focusing on *Agent Based Modelling (ABM)* simulations and "what-if" scenarios, ML, *geo-spatial data science*, and *generative AI* in Python ecosystem with applications in marketing and advertising.
- Line and team management; guiding team members in technical skill and domain expertise development.
  - Stakeholder management; liaising with product, engineering, data science and agency teams.
  - **Public speaker** at conferences and workshops
  - Founding member of the GenAI discussion group at Choreograph and the Hacker's AI group at WPP, whose purpose is to bring AI practitioners together and exchange knowledge.
  - Rapid model/ABM development for clients.
  - Data science lead of data products. Management of a team of developers, engineers, designers for the development of data products.
  - GenAI applications and prototypes, such as
    - A prototype chatbot that answers data questions a tabular dataset utilising text-to-sql capabilities. Collaboration with WPP Open on a PoC leveraging knowledge graphs.
    - A prototype simulation environment for digital personas utilising LLM agents.
  - **Geo-spatial data science** with applications in retail. Initiated and organised upskilling sessions with CARTO for the data services department.
  - Consulting on data science projects and providing solutions across the organisation.
- Apr. 2019 – **Senior Data Scientist**, *Choreograph, WPP (former Sandtable)*, London  
Apr. 2022 Data science and end-to-end development, implementation and execution of ABMs.
- ABMs for a number of sectors; automotive, retail, health (Covid-19 vaccine rollout), media.
  - Project management.
  - Client interaction and management.
- Dec. 2013 – **Senior Data Scientist**, *CountingLab LTD*, Reading  
Apr. 2019 Data analytics in (i) energy, (ii) retail & (iii) defence sectors. Data analysis, research and mathematical modelling. Implementation of machine learning algorithms in Python, analysis of output and presentation of results and responsibilities Main Projects:
- *Client interaction and management*.
  - Short & medium term energy demand *forecasting*. Modelling low-voltage networks for the TVV project, in collaboration with *SSEN*, funded by *Ofgem*.
  - *Customer segmentation* and emergent behaviour patterns for retail client.
  - Sentiment & social network dynamics, funded by *MoD*.
  - Development of algorithms for identifying the veracity of rumours (fake news) (Phase 1 & 2), funded by *MoD*. Expertise in Twitter-data collection. Research lead and project co-management.
  - Automatic threat detection of firearms in X-rays, funded by *SBRI* via *InnovateUK*. Research lead and project management.
  - *Energy demand forecasting* for smart storage control.
  - Dissagregation of energy demand for SMEs, in collaboration with *ANDtr*, funded by *InnovateUK*.
  - Achievement: Joint 3rd place in Global Energy Forecasting Competition 2014.

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## Mentor

Mentored over 10 individuals in data science across multiple platforms, focusing on technical skills and professional development to advance their careers. Mentor at

- [MentorCruise.com](https://MentorCruise.com).
- [KaggleX's mentorship programme](https://KaggleX.com).
- Choreograph, internal programme via [mentorloop.com](https://mentorloop.com), mentoring young data scientists.

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## Tech Stack

- Data Science Stack Python;Pandas, NumPy, SciPy, Sklearn, Streamlit, Ray. Ten years of experience.  
SQL, Docker, GCP, Snowflake.  
Past experience: AWS, C/C++, Matlab, Mathematica
- Methods & techniques
- Agent Based Modelling (ABM) simulations.
  - [Geo-spatial data science](#).
  - Generative AI applications.
  - Machine learning: supervised, semi-supervised & unsupervised algorithms, feature reduction techniques, biased datasets, regression and statistical forecasting models
  - Optimisation algorithms: genetic algorithms, integer programming, etc., see [Publication](#) for further details.
  - Time-series & forecasting methods: time-series analysis, recurrence quantification analysis, kernel density estimation, quantile regression, machine learning regression methods, see [Publication 1](#) and [Publication 2](#) among others for further details.
  - Natural language processing and message stance classification, see [Publication](#) for further details.
  - Image processing: thresholding, key-point detection, object detection, see [Publication](#) for further details.
  - APIs, e.g. [Twitter](#), [Facebook](#), [ESPN NBA](#),
  - Python package development [Euroleague-API](#).
- Research & mathematics Strong mathematical background, analytical and numerical skills.  
13 publications in peer-reviewed journals, 6 in peer-reviewed international conference proceedings, 2 book chapters, with hundreds of citations. Details on [Google scholar profile](#).
- Side Projects NBA fantasy analytics, see blog on [Medium.com](#). Predicting the outcome of Euroleague basketball games, article on [arXiv.org](#). Euroleague [shot charts](#) and [analytics](#). [Generative AI prototypes](#).

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## Education

- Oct. 2009 – Sep. 2013 **D.Phil. (Ph.D.) Theoretical Physics**, *University of Oxford*, Kellogg College, Thesis title: *Spectral dimension in graph models of causal quantum gravity*
- Spring Term 2009 **Visiting Researcher**, *University of Bonn*, Theoretical Physics, via Socrates - Erasmus programme
- Oct. 2004 – Jul. 2009 **B.Sc. Physics**, *University of Athens*, Graduated with “Excellence”, 9.06/10, second best grade in the year out of 200 students. First-class honours degree