Georgios Giasemidis

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Work Experience

Apr. 2022 – present **Lead Data Scientist**, *Choreograph (former Sandtable)*, London
Data science and model building of complex systems focusing on Agent Based Modelling (ABM) simulations and geo-spatial data science in Python with applications in marketing and advertising. Line and team management experience. Main projects:
- Inflation ABM in retail
- Branding ABM in retail
- Geo-spatial retail model

Apr. 2019 – Apr. 2022 **Senior Data Scientist**, *Choreograph (former Sandtable)*, London
Data science and development of ABMs. Project managements. Main projects:
- Audience ABMs in media
- Consumer ABMs in retail
- Covid-19 impact ABM in retail
- Covid-19 vaccine roll-out ABM
- Automotive market ABM

Dec. 2013 – Apr. 2019 **Senior Data Scientist**, *CountingLab LTD*, Reading
Big 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. Main Projects:
- Short & medium term energy demand forecasting. Modelling future demand low-voltage networks for the TVV project, in collaboration with *SSEN*, funded by *Ofgem*.
- Customer segmentation and emergent behaviour patterns. Clients: *Chic Outlet Shopping*, *Quidco*, *Net-A-Porter*.
- 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.

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

Tech Stack

Data Science Stack Python (excellent); pandas, numpy, scipy, sklearn. Nine years of experience.
SQL (excellent), GCP(very good), AWS (good), Docker (good), Elasticsearch (good), C/C++ (good), Matlab (very good), Mathematica (good).

Methods & techniques	○ Agent Based Modelling (ABM) simulations.
	○ Geo-spatial data science.
	○ Machine learning: supervised, semi-supervised & unsupervised algorithms, feature reduction techniques, biased datasets.
	○ 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.
	○ API data collection, e.g. Twitter, Facebook, ESPN NBA, Euroleague.
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.

Interests

Sciences, raspberry pi applications, Lego enthusiast, scuba diving, travelling and sports.

Analytics in sports, particularly basketball.