Marios Kokmotos

(+44) 7753938749 **Email address:** marioskokmotos2@gmail.com

Website: https://www.linkedin.com/in/marios-kokmotos/ **Website:** https://github.com/MariosKokmo

Address: Apartment 5, Friday Bridge Berkley Street, B1 2LB Birmingham (United Kingdom)

ABOUT ME

Data Scientist with a degree in Electrical & Computer Engineering. I am passionate about Data Science, Machine Learning and Artificial Intelligence and fascinated by the prospect of applying these in real world scenarios by extracting meaningful insights from data and addressing business problems.

WORK EXPERIENCE

Data scientist
Rolls-Royce plc [06/2022 – Current]

Country: United Kingdom

Control Systems Design Engineer
Rolls-Royce plc [09/2017 – 06/2022]

City: Birmingham
Country: United Kingdom

- I am developing control logic and system architecture in a Model-Based environment using Agile methodologies (Scrum).
- I am responsible for the networking technology in future military projects and design the experiments proving the maturity of the technology and the architecture.
- I design systems utilising data-driven methods to optimise the performance and adaptability of control and networking systems.
- I deliver presentations to stakeholders and Chief Engineers pitching solutions to eventually get them into production. I liaise with Subject Matter Experts to validate and integrate the system.
- I have designed control systems solutions for Trent 7000 and Trent 1000 engines, developing software requirements for real-time performance, collaborating with the software design and verification teams. I developed system solutions from the architecture down to the hardware implementation level and the configuration of the software and hardware interfaces.
- Trent 1000 control software: I was the responsible System Engineer for the Operating Software of the Engine Controller and the point of contact for integration of the Application Software and the Operating Software at the system level.
- Trent 7000 control software: I completed several system updates dictated by regulatory bodies and the customer such as for the Anti-Ice and the Fuel shut-off valves. The latter was key in achieving certification in record time.

EDUCATION AND TRAINING

Doctor of Philosophy (Phd) - Physics and Astronomy
University of Birmingham [05/2019 – Current]

Address: (United Kingdom)
https://www.birmingham.ac.uk/index.aspx
Field(s) of study: Ultracold Matter
Level in EQF: EQF level 8

The topic of my research revolves around the use of Ultracold matter to perform quantum simulations of both quantum and classical analog systems. Ultracold matter systems are a strong candidate for the implementation of a Quantum Computer

and serve as an excellent substrate on which strong correlations and interactions at near absolute zero temperatures can highlight the salient dynamics of quantum systems.
My research includes devising models to describe the system dynamics, performing computationally intensive simulations and analysing large amounts of data in order to extract meaningful patterns for the dynamics and the response of the systems.
I build extensive numerical models that generate data of system dynamics which I then analyse and apply dimensionality reduction techniques on, in order to reduce the complexity of the problem. Having the dominant low-dimensional patterns of the dynamics, the next step is to extract the major features that describe the system and then visualise the simplified system dynamics. Finally, insights are obtained for the overall system dynamics and its response can be easily extrapolated to make meaningful predictions of its evolution.

Master of Engineering
National Technical University of Athens - School of Electrical and Computer Engineering [09/2009 – 07/2017]

Address: Athens (Greece)
https://www.ece.ntua.gr/en
Field(s) of study: Electrical and Computer Engineering
Final grade : 7.6/10 (Top 20%) – **Level in EQF:** EQF level 7
Type of credits: ECTS – **Number of credits:** 300

Specialization: Control Systems and Robotics
List of Specialty Courses: 25 Courses in the field of Control, Robotics and Signal Processing (indicative): Optimization Techniques, Nonlinear Optimization, Robotics, Digital Signal Processing, Optimal Control

List of Core Courses: 35 Courses covering Engineering Mathematics and Physics, Computer Science, Control Systems, Electronics (indicative): Partial Differential Equations, Numerical Analysis, Complex Analysis, Control Theory, Probability and Statistics, Linear Algebra, C and C++, Computer Architecture, Complexity Theory

Master thesis: "Dynamics of solitons in non-linear media with non-local response", grade 10/10

DIGITAL SKILLS

My Digital Skills

Machine Learning / Artificial Intelligence / Optimization Methods / Deep Learning / Linux / Microsoft Windows / Data Science / Data Visualisation

Software Skills
Python / C / C++ / SQL / Matlab

Software Engineering Tools and Platforms
Azure Databricks / GIT (GitHub) / Jupyter Notebook / Microsoft Azure / Anaconda

Software Libraries and Frameworks
Scikit-Learn / Numpy / Pandas / Matplotlib / PyTorch / Keras / Tensorflow / OpenCV / Seaborn

NETWORKS AND MEMBERSHIPS

IET - Member of the Institute of Engineering and Technology

ONLINE COURSES

Applied Data Science (WorldQuant University)
[01/2021 – 06/2021]

Related Projects:

- Amazon Review Prediction from text. NLP analysis to extract sentiment and regression to predict review score.
- Predicting drug use and abuse based on real NHS data. Statistical analysis of data, detecting outliers and predicting over-prescription of drugs through classification and anomaly detection.

https://www.wqu.edu/programs/applied-ds-lab/

Data Scientist with Python (DataCamp)

Topics: Data Science, Machine Learning, Feature Engineering, Exploratory Data Analysis, Data Visualization

https://www.datacamp.com/tracks/data-scientist-with-python

Deep Learning Nanodegree (Udacity)

[02/2020 – 05/2020]

- Topics: PyTorch, Deep Learning, Convolutional Neural Network, Recurrent Neural Network, Generative Adversarial Network
- Related Projects: Dog breeds classification, Script Generation, Human Face Generation, Model Deployment in AWS using Amazon SageMaker and REST API.

https://www.udacity.com/course/deep-learning-nanodegree--nd101