Christos Hadjinikolis

Senior Python ML Engineer

contact

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🌐 **My-website**

in **LinkedIn**

 github

Flink Meetup

languages

bilingual greek/english

programming

Python ●●●●○
Java ●●●●○
Matlab ●●●○○
SQL ●●●○○
Cypher ●●○○○

developer

TDD, git + CI/CD
(Jenkins/Team-City)

cloud-platforms

 GCP ●●●●○
 AWS ●●●●○

Technologies & Frameworks

pySpark, Spark, Flink,
Kafka, Elasticsearch,
Neo4J, SQL, Docker,
Kubelfow, Airflow

Python Libs

pandas, numpy,
sklearn, pyTorch

visualisations

Gephi, Seaborn, plotly,
Kibana

about me

Senior ML Engineer with excellent presentation and communication skills. A passionate researcher with exposure to deep learning & evolutionary AI. A competent problem-solver with a proven academic record in the field of AI and with practical experience in ML-Ops, ML-engineering & advanced Data Science.

education

2010–2014	**Ph.D.** in Computer Science	King's College London, UK
	Persuasion Dialogues & Opponent Modelling. Developed a prediction mechanism applied on Knowledge Graphs. Involved the application of graph-analytics on large-scale graphs & statistical inference.	
2004–2010	**Diploma (BEng)** in Computer Engineering	University of Thessaly, GR
	A five year-long polytechnic degree with a solid mathematical background (10 courses) ranging from pure (theoretical) computer science/engineering aspects to networking and telecommunications. *Majored in Artificial Intelligence*.	
2002–2004	**Military Officer: Second Lieutenant**	National Guard, CY
	Obligatory army service; position acquired through competitive IQ & athletic exams.	

work-experience

since 12/20	**Vortexa, London, UK**	Senior Python ML-Engineer
	Part of the Predictions & Market Modelling Team, responsible for generating high-value forecasts that enrich our data products through implementing data processing and ML pipelines to predict the operations of the >10,000 tankers tracked by our system. **My focus is on**: designing, implementing and testing code that allows historically niche research to be elevated to the real-world scale; working with data scientists, analysts, engineers and experts, to help bridge the gap between scientific experiments and commercial products by ensuring 100% uptime and bulletproof fault-tolerance of every component of the infrastructure; work closely with team members to implement best practices in our key technologies.	
since 1/15	**Kings College London, Dept. of Informatics, London, UK**	Visiting Researcher
	Interacting with members of the Agents & Intelligent Systems group on AI related topics (my current interests orient around AI standardisation and AI ethics). Occasionally working on the development of next generation Data Mining techniques.	
04/16-11/20	**DataReply, London, UK**	Lead ML Engineer
	Having started as a Data Scientist, I gradually progressed within the company evolving into a ML-engineer. Currently leading a practice of Data- Scientists & Engineers on relevant projects. **Main responsibilities**: translating business problems into analytic frameworks; communicating & controlling the overall plan and timeline; mentoring less experienced members, and; driving innovation within the practice.	
02–03/16	**Greenwich School of Management**	Associate Lecturer
	Taught an introductory course on Computing.	
2012–2016	**David Game College, London, UK**	Programming Teacher
	Taught MATLAB & delivered the AS Computing Course (Java, Python, html, CSS).	
2010–2014	**King's College London & University College London, UK**	Teaching Assistant
	Programming (Java), Data Structures, Computer Systems, Semantic Web, DBMS-SQL & AI.	
2013–2014	**European University, London, UK**	Part-time Lecturer
	Developed and taught a semester-long course on Management Information Systems.	

Consulting Roles with Data Reply

Vodafone Group London [07/2020 - 11/2020]   Senior ML Engineer Role
Infinity Platform
Description: Part of the Advanced Analytics Team, responsible for driving the implementation of CI/CD pipelines to support best practices around the development of ML pipelines built within an internally developed platform based on Apache Kubeflow.
Technologies: *Python, Jenkins, KubeFlow, Docker, Kubernetes, GCP*

Vodafone Group London [02/2020 - 07/2020]   Lead ML Engineer Role
Developing Cloud-native Data Analytics Competencies on GCP
Description: Operating as a technical lead as part of a new team, responsible for delivering cloud native data analytics projects in the post-migration era for Vodafone. Involved in the requirements gathering process, gap analysis and impact assessment estimates. Responsible for the delivery of Big Data related projects guided by business drives related to marketing, recommendations, automation and resource optimisation.
Technologies: *Python, pySpark, Jenkins, AirFlow, Kubernetes, GCP*

Vodafone Group London [09/2019 - 02/2020]   Senior ML Engineer Role
ML Framework Development & Migration Supervision
Description: Working with a team of python developers, focusing on the migration of ML models, developed by an internal framework, to GCP. We are also managing the migration of all *CI/CD* pipelines, scheduling and orchestration jobs that employ this framework, from on-premise to cloud. The framework is based on pySpark and is mainly used for feature engineering and ML industrialisation. Additional duties concern the development of a set of pipelines to build approved base-images (for DataProc and Deep Learning with TF) to be used by the data scientist.
Technologies: *Python, pySpark, Jenkins, AirFlow, GCP*

CNHi, Chicago [05-09/2019]   Head of Data Science Role
Analysis of Agriculture Vehicle Data
Description: Led an agile team of data scientists and data engineers. Interacted directly with stakeholders to collect business requirements and translate them into data science/data engineering tasks. Guided and participated in defining and completing relevant tasks. Applied basic statistic analytics and developed time series prediction models that operate as alert triggers when relevant thresholds are excited.
Technologies: *Azure*, *Databricks*, *PowerBi*, *PySpark*, *Python (sklearn, pandas)*

UBS, London [08/2017-04/2019]   ML Engineer Role
Analysis of Unstructured and Structured Data
Description: Developed end-to-end processing pipelines to ingest and analyse data in real-time. Applied Graph Analytics for the extraction of actionable insights, challenging organisation structures and aiding process optimisation (batch analysis). Applied Process Mining techniques to aid understanding of various processes and behaviours of entities of interest in event logs (stream processing). Generated useful visuals through dashboards and python notebooks.
Technologies: *Elasticsearch*, *Kafka*, *Apache Flink*, *Python (sklearn)*, *Kibana*

Irish Road Safety Authority, London [05-07/2017]   Data Science Role
Analysis of Road Safety Data
Description: Involved analysing and extracting insights from MySQL data for predicting high-way crashes, identifying high risk nodes in the traffic network as well as categorising/profiling drivers/operators based on compliance rates, inspections and defects.
Technologies: *MySQL*, *Neo4J*, *Google Cloud*, *R*, *Python (sklearn)*

GameSys, London [03-04/2017]   Data Engineering Role
Architecture Design and Support for new Digital Platform
Description: POC work concerned with showcasing how a Kafka Schema Registry can be used for data validation purposes. Trained a team of Engineers on how to deploy it and integrate it into their existing solution.
Technologies: *Apache Kafka*, *Google Cloud*

The Mondadori Group, Milan [11–12/2016]   Data Science/Engineering Role
Development of a Recommender Engine
Description: Analysed user preferences harvested from this publisher's social commerce platform where members can interact by sharing/buying/rating books maintained in their digital "library". Applied community detection & market basket analysis techniques (ALS method) and the extraction of book association rules, all of which could then used for both user-to-user and user-to-book recommendations.
Technologies: *Scala, SQL, Apache Spark, MongoDB*

Unicredit, Milan [10–11/2016]   Data Engineering Role
Development of a Fuzzy Matching Mapping Engine
Description: Developed a batch process solution for entity identification and matching between data retrieved from distinct databases, based on a variant of Levenshtein's distance algorithm.
Technologies: *Scala, SQL, Apache Spark*

Data-Science Projects

Side Project [01-03/2018]   Data Science Side Project
Prototyping: Feature-based Customer Review Mining- An Implementation
Description: This project, summarises and explains the approach elaborated in [Kushal Bafna & Durga Toshniwal, 2013]. Its purpose was to serve as a prototype for an internal company project I was working on. The problem I addressed concerns allowing customers to extract objective review summaries relevant to a book, without having to go through the trouble of reading all of the available reviews.
Github Repo: here
Technologies: *Python (nltk), Association Rules Mining, Python Notebooks*

DataReply UK, London [01-03/2017]   Data Science Role, Internal Project
Team R&D Project - Conference Demonstration: Building a chatbot
Description: Used a corpus of movie dialogues to train a sequence-to-sequence model for the implementation of a conversational chatbot.
Technologies: *Python (nltk), Apache Spark, s2s NNs, Tensorflow, Google Cloud*

DataReply UK, London [09–10/2016]   Data Science/Engineering Role, Internal Project
Team Project - Conference Demonstration: Facial expression recognition application
Description: Developed a Neural Network model capable of recognising facial expressions in images; then replaced faces in an image with the corresponding emoticon. Model had to be fed with a large number of categorised images. Image collection was achieved through web-scrapping (beautiful-soup) + semi-manual filtering.
Technologies: *Python, OpenCV, Keras, Tensorflow*

DataReply UK, London [05–09 2016] Data Science/Engineering Role, Internal Project
R&D Project: Graph analytics & Data Augmentation
Description: Developed a graph analytics solution for company-director networks. Local analysis: developed a real-time graph neighbourhood constructor for companies of interest with multiple visualisation options. Global analysis: carried out centrality (GraphFrames & PageRank) and community detection analytics.
Github Repo: here
Technologies: *Scala, Apache Spark, CYPHER, Neo4j, Python, webAPI*

DataReply UK, London [06 2016] Data Science/Engineering Role, Internal Project
Conference Demonstration Project: Twitter Sentiment Analysis
Description: Used the twitter API to collect MP tweets related to #BREXIT. Tweets were then categorised based on the public position of the respective MP and were analysed using NLP libraries. Finally, a naive Bayes prediction model was developed to predict any user's opinion, by leveraging their own tweets and those of people they follow.
Github Repo: here
Technologies: *Twitter API, Python (nltk, pySpark), Apache Spark*

certificates & awards

07/2020	**AWS Certified Machine Learning - Specialty** Validation Number: D0R0WC7CN1VQ13SV	AWS
01/2019	**Process Mining** License number: AFU2VTP6273V	Coursera Course Certificates
10/2017	**Google Certified Professional - Data Engineer** Credential ID: 000000400	Google Cloud Certified
07/2017	**Advanced Elasticsearch: Data modelling** Enrolment Id: 33442	Elastic
06/2016	**Graph Analytics for Big Data** License number: NZADYAQ7N8FW	Coursera Course Certificates
05/2016	**Apache Spark Developer Certification** License number: 1.x–0548	O'Reilly Media
04/2016	**Neo4j Certified Professional** License number: here	Neo Technology, Creators of Neo4j
2013	**Best Poster Award** Selected amongst 413 contestants (Prestigious Conference)	IJCAI Conference, Beijing, China
2012	**Outstanding Teaching Assistant Award** Notable Mention: Department of Informatics (based on student voting)	King's College London
2011	**Graduate Certificate in Academic Practice** Related with improving one's teaching abilities	King's College London
2010-2013	**PhD Tuition Fees Scholarship** Provided by EPSRC and King's College London	EPSRC

talks

2020	**Big Data Warsaw** Monitoring & Analysing Communication and Trade Events as Graphs, **Details:** here	Industry Conference
2018	**Connected Data London** AI tribes and interconnections: what's graph got to do with it?, **Details:** here	Industry Conference
2018	**Minds Mastering Machines** A talk on doing Data Science the Agile Way, **Details:** here	Industry Conference

| 2018 | **London Big Data Week** | Industry Conference |

A talk on Big Data and Graph Analytics, **Details:** here

| 2016 | **Open Data Science Conference** | Industry Conference |

A talk on the advancements in the field of graph-isomorphism, **Video:** here

| 2013 | **The Imperial College London ACM Student Chapter Seminars** | Workshop |

On anticipating opponent information in competitive contexts, **Video:** here (Invited)

| 2011 | **The 6th Joint Working Group Workshops** | Maastricht University, NL |

On Strategic Consideration in Dialogue Games (Invited)

publications

2015   **Building Support-based Opponent Models in Persuasion Dialogues**
C. Hadjinikolis, S. Modgil, E. Black
Theory & Applications of Formal Argumentation (LNAI) (Workshop)

2013   **Opponent Modelling in Persuasion Dialogues**
C. Hadjinikolis, Y. Siantos, S. Modgil, E. Black, P. McBurney
23rd International Joint Conference on AI (AAAI)(Highly recognised)

2012   **Mechanisms for Opponent Modelling**
C. Hadjinikolis, S. Modgil, E. Black, P. McBurney
Imperial College Computing Student Workshop (*Schloss Dagstuhl*)(Workshop)

2012   **Investigating Strategic Considerations in Persuasion Dialogue Games**
C. Hadjinikolis, S. Modgil, E. Black, P. McBurney, M. Luck
Starting AI Researcher Symposium (IOS Press)(Workshop)

2012   **Minimising Processor Communication in Parallel Approximate String Matching**
C. Hadjinikolis, C. S. Iliopoulos, S. P. Pissis, and A. Stamatakis
Heidelberg Institute for Theoretical Studies (Tech. Report)

programming commitees

| 2020 | **MIWAI** | PC Member |

The 14th Multi-Disciplinary International Workshop on AI

| 2016 | **MIWAI** | PC Member |

The 10th Multi-Disciplinary International Workshop on AI

| 2015 | **MIWAI** | PC Member |

The 9th Multi-Disciplinary International Workshop on AI

| 2012 | **ICCSW** | PC Member |

Imperial College Computing Student Workshop

| 2012 | **STAIRS** | PC Member |

6th European Starting AI Researcher Symposium

interests

- **Meetups:** Organiser of the Apache Flink Meetup in London

- **Sports:** Basketball, Football, Tennis, Jogging, Swimming

- **Reading:** Comics, Philosophy, Politics