Tarak KHARRAT

flat 29, 82 Amberley road W9 2JY London, UK   Date of birth: February 3rd,
Phone: (+44) 7 807 xxxxxx   1986 (35 year old)
Email: tarak@realanalytics.co.uk   Nationality: French,Tunisian

Education

2012 − 2015	**University of Manchester**, UK. **PhD** in applied statistics. **Title**: A Journey Across Football Modelling with Application to Algorithmic Trading. **President's Doctoral Scholar Award** holder 2012–2015. **Maths' Award Winner** in February 2015. Participated in multiple consultancy projects with industry.
2009 − 2010	**La Sorbonne (Paris 1- Paris 6)**, France. **Master of science** in Mathematics and Mathematical Methods in Economics and Finance. **Specialisation**: Quantitative finance. **Main courses**: Stochastic Calculus, Simulation and Asset Pricing, PDE in finance, Levy processes, Monte Carlo Methods, Statistics ⋯.
2007 − 2010	**ENSTA Paris**, France. A member of ParisTech (a consortium grouping the most prestigious Engineering Schools in France). **Specialisation**: Simulation and Mathematical Engineering. **Main courses** : programming in C^{++}, Martingales and Stochastic Algorithms, Stochastic Calculus, Numerical Simulation, Systems Control, Economy, ⋯.
2005 − 2007	**Lycée Louis Le Grand**, Paris, France. Completed a three-year scientific program in preparation for the national "Grande École" competitive exam.

Work Experience

Nov 2020– Current	**Real Analytics**, London, UK. Head of Machine Learning and Artificial Intelligence. Led the creation (from scratch) of an AI powered platform to assist professional football clubs recruit players efficiently.. In charge of the research effort and the development of new models to rate players objectively..
June 2020– Nov 2020	**Comply Advantage**, London, UK. Lead Data scientist. In charge of auditing, optimising and objectively scoring the machine learning (text classification) pipeline..
Mar 2016– Apr 2020	**Kickdex Limited**, London, UK. Lead Data scientist, co-head of Research and Development. In charge of building and improving predictive (pre-match) models for football and refining algorithmic trading strategies.
Jan 2018–Sep 2020 (Part time)	**University of Liverpool, Centre for Sports Business**, Liverpool, UK. Research fellow. Conducting research projects in statistics and sports analytics (mainly football).
Oct 2015–Dec 2017 (27 months)	**University of Salford, Centre for Sports Business**, Manchester, UK. Research fellow. Conducting research projects in statistics and sports analytics (mainly football).
2011-2012 (16 months)	**Societe Generale Americas Security**, New York, USA. Proprietary trading department. · Collaborating closely with the high frequency and basket trading desks. · Conducting research and statistical analyses of equity securities and indexes. · Developing new trading framework and strategies as well as maintaining and improving existing ones.
2009-2010 (16 months)	**Total**, Paris, France. Shipping & Trading department (External Consultant). · Participated in the detection and resolution of bugs in the *STAGE 6.1.10* software (a simulation tool able to analyse any tank transportable product chain behaviour).

Computer Skills

· **R** developer: author of 50+ packages (several packages on the CRAN archive).
· **python**: advanced programmer with deep working experience with the core Machine learning frameworks (sklearn, numpy, pandas).
· **Compiled Languages**: · Strong knowledge of C^{++}.
· **Deep learning** experienced practitioner with good understanding of most architectures and advanced knowledge of pyTorch, and fastai. Specialised in sequence data modelling (Time series for example) and (dynamic) graph neural networks (implemented with PyTorch Geometric).

· Deep understanding of core **machine learning** algorithms for classification, regression, clustering and reinforcement learning.
· Good working experience with **MongoDB** (NoSQL) Database.
· Strong knowledge of data collection by **web-scraping**.
· **devOps** good experience with version control (git), CI/CD pipelines, Container creation (docker) and orchestration (Kubernetes) and API development.
· **cloud**: advanced knowledge of Google Cloud Platform (GCP).
· Ability to deploy advanced research model to production (on self-managed server or on GCP).

Language

French: mother tongue.

Arabic: bilingual.

English: fluent.

Spanish: Intermediate.

Interests and Activities

· Soccer, Tennis (member of the Tunisian national for more than 8 years).