George Fitton

Industry Experience

Unilever R&D, Computational Scientist, 2020 to present

Role Summary

Leverage the power of computation to accelerate discoveries, model complex systems, and drive innovation across a wide range of disciplines in research and business.

Key Projects

Digital Transformation

Lead Developer: Lead Python codebase development replacing legacy business-critical risk assessment systems; work with stakeholders to gather requirements, manage team of 3-4 developers to deliver requirements + UAT, manage handover post go-live: software maintenance and governance; automated serverless functions allow product to be deployed to over 1,000 R&D users.

Technical Consultant: Support development, deployment, and maintenance of all in-house data science platform tools built in Python (Dash) and R (Shiny); provide continuous development and testing consultation and support; data science platform steering team and community of practice member to advise on short and long term development objectives.

Project Lead: Design and build robust data pipelines and data validation on Databricks platform; build workflows that connect R and Python logic to user dashboards built over company-wide Datalake; define governance processes and data access solutions for confidential and sensitive data.

Computational Science

PhD Supervisor: Theoretical and Bayesian probabilistic modelling of toxicokinetic processes in aquatic organisms for environmental risk assessments; collaboration with Birmingham University Biosciences department; Biotechnology and Biological Sciences Research Council (BBSRC) funded.

MSc Supervisor: Geneset time-series analysis for developmental biology risk assessments; collaboration with Birkbeck University Bioinformatics department.

Project Lead: Computational fluid dynamics simulations (AeroSolved) of particle deposition in the lung for inhalation risk assessments; collaboration with Zurich ETH University.

People

Coordinator: Cambridge mathematics placements (CMP) talent pipeline; probability and statistics learning & development weekly sessions; computational science community of learning monthly meetings.

UBS Investment Bank, Quantitative Analyst, 2018 to 2020

Role Summary

Price and risk-manage counter-party credit exposure (American Monte Carlo method).

Key Projects

Model Submission

Model Owner: Regulatory submission of stochastic interest model.

External Advocacy

Guest Lecturer: Guest lecture series on financial mathematics at AGH University business department.

HSBC Investment Bank, Senior Analyst, 2016 to 2018

Role Summary

Price and risk-manage complex and non-standard foreign exchange derivatives.

Key Projects

Model Review

Model Reviewer: Regulatory submission of stochastic-local volatility (SLV) model.

External Advocacy

Coordinator: Conference on stochastic control theory in finance with Polish Institute of Mathematics (IMPAN).

Academic Experience

Ecole des Ponts, Lead Researcher, 2013 to 2016

Role Summary

Lead theoretical and experimental research in hydrological and meteorological processes.

Key Projects

Trafipollu

Project lead: TRIMIS EU project on multi-scale modelling of traffic pollutants in urban areas.

Blue Green Dream

Researcher: Climate-KIC EU project studying weather and hydrological processes in urban areas.

Complexity Science

PhD Supervisor: Simulation and analysis of turbulence in urban lakes funded by LEESU (Laboratoire Eau Environnement et Systemes Urbains).

Ecole des Ponts, Researcher, 2010 to 2013

Role Summary

Contribute to theoretical and experimental research in hydrological and meteorological processes.

Key Projects

WAUDIT Wind Resource Audit and Assessment

Researcher: EU-FP7 ITN collaboration with EDF to develop stochastic models of wind velocity fluctuations for wind energy power simulation and prediction.

Education

PhD in Physics, Ecole des Ponts, 2013

Multifractal analysis and simulation of wind energy fluctuations.

BSc / MSc in Mathematics, Reading University, 2010

A comparative study of computational methods in cosmic gas dynamics continued.

Skills

Soft Skills

Languages: English (Native), Polish (B2), French (B1), German (A2).

Communication: Presentations at over 20 international conferences.

Supervision: 3 PhD students, 10 MSc students.

Lecturing: Physics, financial mathematics.

Technical Skills

Programming: R (+Shiny), Python (+Dash), SQL, LaTeX, HTML, CSS.

Tools: VSCode, Git, Docker, Insomnia / Postman (APIs).

Other: DevOps, Databricks, Azure ML, Genestack ODM.

Publications

Academic

https://www.semanticscholar.org/author/George-Fitton/100615017

Website

https://jobs-george.github.io/