

# Louise Kirkham

(MPhys MSc) Data Scientist | Physicist | Researcher

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## Summary

A passionate data scientist with extensive experimental research experience and demonstrated ability to lead collaborative projects with partners from industry, academia and government, both UK and internationally.

Keen interest in applying machine learning techniques to optimisation and recommendation problems and scaling data science projects through lean, agile ways of working to deliver real, data-driven business solutions.

Always looking for new opportunities with forward-thinking businesses for continued professional development and to provide exciting insights and true impact.

## Skills

**Programming languages:** Python, R, Matlab, Haskell, Scala

**ML Frameworks:** Scikit-learn, NLTK, Tensorflow

**Data Visualisation:** Plotly, Matplotlib, Seaborn, ggplot2, Dash, Shiny

**Model Deployment:** Docker

**Cloud Computing:** Google Cloud Platform

**Ways of Working:** Agile Framework, Git version control, Lean Startup Approach, Scaling Data Science Projects, Test Driven Development

**Processing and Compute Resources:** SQL, Spark

## Core Values

Honesty and Integrity  
Continued Professional Development  
Accomplishment and Achievement  
Collaboration  
Variety and Diversity  
Work/Life Balance

## Education

**University of York** 2004 - 2008  
MPhys (Hons) Physics with Astrophysics 2009  
Awarded: 2:1  
Dissertation: Upgrading the Department's Radio Telescope for the Detection of the 6.7 GHz Methanol Maser Line

**University of Manchester** 2011 - 2012  
Radio Wave Imaging and Sensing MSc (Hons) 2011  
Awarded: Distinction  
Dissertation: Characterisation and Calibration of a Large Aperture (1.6 m) ka-band Indoor Passive Millimetre Wave Security Screening Imager [Proc. SPIE 8544, Millimetre Wave and Terahertz Sensors and Technology V, 854408 (26 October 2012)]

## Employment

**Royal Mail** Dec. 2019 - Present  
**Data Scientist**  
Supporting projects within the data science team within Group Business Intelligence, particularly focused on vehicle routing optimisation, demand forecasting, revenue prediction and recommender systems. Helping to deliver new insights and process-enhancing tools for the business to allow us to achieve our strategy of becoming parcels business.  
Line management of junior colleagues and mentoring to support team members with agile ways of working and cloud deployment of data science projects.

**Junior Data Scientist** July 2018 - Dec. 2019  
Supporting projects within the data science team within Group Business Intelligence, focused on customer experience insight through natural language processing of enquiries, customer segmentation revenue prediction and churn modelling.

**Defence Science and Technology Laboratory (DSTL)** Apr. 2018 - July 2018  
**Senior Research Scientist**  
Providing scientific expertise to support research and development projects within the Sensing and Detection group of the Counter Terrorism and Security division. Experimental design and evaluation of detection and diagnostic technology for military and security applications. Leading an experimental trial team to deliver cutting edge research including laser-plasma acceleration at a world-class high-power laser facility.

**Research Scientist** Nov. 2014 - Apr. 2018  
Support to research and development work within the Novel RF Techniques Team of the Sensing and Detection Group, Counter Terrorism and Security Division. Collaborating with industrial, academic and other government departments both UK and internationally to deliver critical, cutting-edge advice and insight to military and government stakeholders.

**Graduate Research Scientist** Nov. 2012 - Nov. 2015  
Provided support to research and development work within the Physical Detection Team, Sensing and Detection Group, Security Sciences Department. Contributed to experimental design and evaluation testing of operational military diagnostic equipment.

## Activities

Swing and jazz dance (Lindy Hop and Chrous Line), quad-skating, motorcycling  
Volunteering - Outreach with STEM Ambassador Program, Support to Hackney and Homerton Mutual Aid Groups  
Stage-managing and Front-of-House support to dance and cabaret events.