**Emma Luk**

Address: Guildford,Mobile: +44 7974 522 805 Email: [emma\_luk2@hotmail.com](mailto:emma_luk2@hotmail.com?subject=Data%20Science%20Position) [LinkedIn](https://www.linkedin.com/in/emma-luk) [Data Science Projects](https://github.com/emma-luk/pdf-data-science/blob/master/Emma_Luk_A_selection_of_my_data_science_work.pdf)

**Professional Profile:**

* Dynamic Professional with a Strong Background in E-commerce and Digital Product Development
* Highly skilled and versatile Data Analyst/Data Scientist with a proven track record in data analysis, machine learning, and statistical modelling.
* Extensive industry knowledge in the financial sector, contributing to data-driven projects such as customer segmentation, risk analysis, compliance, and fraud detection.

**Summary**

* Results-oriented and versatile professional with a diverse background in e-commerce and digital product development.
* Demonstrated adaptability in working across different industries and leveraging technology to enhance customer experiences.
* Skilled in collaborating with cross-functional teams to drive successful outcomes.
* Expertise in web design, development, and e-commerce disciplines. Committed to empowering experts and enhancing user experiences to align with the mission of innovative organisations.
* Highly skilled and experienced Data Analytics professional with a Master's degree in Data Science and Analytics, specialising in machine learning, big data, and visual analytics technologies.
* Strong communication skills and ability to build relationships with business users, effectively applying analytical judgment to drive insights and actionable recommendations.
* Results-oriented mindset with effective planning, problem-solving, resource organisation, and a passionate drive to achieve desired outcomes.

**Key Skills**

* **Marketing Analytics**: Proficient in performance marketing analytics, leveraging data insights to optimise marketing strategies.
* **Quantitative Analysis**: Skilled in quantitative methods and data analysis to drive data-driven decision-making.
* **A/B Testing**: Experienced in conducting large-scale A/B experiments to test and optimise marketing initiatives.
* **Measurement Strategies**: Expertise in designing and implementing measurement strategies, including randomised lift tests and marketing mix models.
* **Collaboration**: Strong ability to collaborate with cross-functional teams and marketing stakeholders for data-driven decision-making.
* **SQL and Python**: Solid grounding in SQL and proficiency in Python for data analysis and manipulation.

**Professional Experience**

**2021 – 2023 Data Scientist, BAE Systems plc, Portsmouth**

* Collaborated with cross-functional teams for data requirements analysis.
* Designed and implemented efficient data models and structures.
* Developed and maintained data pipelines and ETL processes.
* Conducted data cleaning, transformation, and validation.
* Created reports and visualisations for data insights.
* Assisted in the development of data governance policies.
* Worked on client projects, ensuring timely delivery of high-quality data solutions.

**Achievements:**

* Successfully implemented a data pipeline that reduced data processing time by 30%.
* Developed a data cleansing algorithm that improved data accuracy by 20%.
* Created interactive dashboards that enhanced data visualisation and improved decision-making processes.
* Received recognition for outstanding contribution to a complex data migration project, ensuring smooth transition and minimal downtime across Canadian/US and European markets.
* Led a cross-functional team in the successful delivery of a data-driven project, resulting in cost savings of $100,000 for the client.

**2020 – 2020 Data Scientist with Deep Learning (Contract), Massive Analytic Ltd, London**

* Worked on developing Sequence Prediction Models using Deep Learning techniques like Long Short Term Memory Networks (LSTM) and Fuzzy Time Series.
* Built and developed control units for self-driving cars using advanced data science and deep learning techniques.
* Created mock-ups and prototypes for client demonstrations, effectively showcasing the capabilities and potential of the developed solutions.

**Achievements:**

* Successfully developed and deployed an LSTM-based sequence prediction model, achieving a prediction accuracy of 95% and outperforming previous models by 15%.
* Led a team in designing and implementing a control unit for a self-driving car, ensuring smooth and safe navigation in various scenarios, resulting in a 20% reduction in accidents during testing.
* Received recognition for designing intuitive user interfaces and creating engaging visualisations, enhancing the effectiveness of client demonstrations and contributing to increased client satisfaction.

**2001-2018 Experience Highlights and Achievements:**

**2016 – 2018 Software Developer at Public Health England (PHE), Department of Health:**

* Successfully designed, developed, and supported analytical systems, contributing to improved public health decision-making.
* Applied technical expertise in SQL Server, SSIS, and T-SQL to build and support data warehouses/marts.
* Influenced testing and implementation processes, leading to enhanced system performance and quality.
* Utilised data science and data visualisation techniques to improve the usability and accessibility of health-related data.

**2014 – 2015 Web Developer at SelectScience:**

* Collaborated on cross-functional teams to develop and maintain software applications, ensuring adherence to quality standards.
* Developed new features and functionalities using C# and Python, resulting in enhanced user experiences.
* Conducted system analysis and proposed technical solutions to improve system efficiency.

**2013-2014 ASP.NET Developer at NMR Information Partnerships Plc:**

* Translated complex business requirements into tangible technical solutions, enabling data-driven business strategies.

**2012-2013 User Experience Developer at Hospitality Guest Experience Management:**

* Designed and implemented websites, online feedback tools, and landing pages, meeting client and end-user needs.
* Conducted user research and testing to drive data-driven design decisions and improve user experiences.

**2010-2012 Online Marketing Webmaster at AXA Wealth:**

* Conducted machine learning to accelerate A/B testing and multivariate testing, enhancing marketing strategies.
* Developed algorithms to improve the accuracy of recommendation engines, leading to personalised customer experiences.

**2004-2010 Web Designer/Developer at Hargreaves Lansdown Stockbrokers & Asset Management Ltd:**

* Applied advanced analytics techniques, including predictive modelling and event-based analytics, for improved marketing strategies and customer experience analysis.

**2001-2004 Web Designer/Developer at V-ten Limited (a subsidiary of DaimlerChrysler):**

* Successfully managed high-value projects for Mercedes-Benz and Smart websites, implementing e-commerce disciplines and enhancing customer experiences.

**Education and Professional Certification**

**2022 - Present Data Science & Machine Learning Program, ML** with Supervised, Unsupervised & Recommender systems, **Deep Learning** withNeural Networks**,** Computer vision**,** Natural Language Processing, **ML Ops** at Scaler

**2018 – 2020 MSc Data Science and Analytics** Brunel University, London, UK

Key modules

* **Big Data Analytics** covers data mining alongside machine learning techniques (e.g. clustering, regression, support vector machines, boosting, decision trees and neural networks) etc
* **Quantitative Data Analysis** **& Statistics with R**
* **High Performance Computational**

**Infrastructures in Java** (Hadoop & NoSQL)

* **Data Visualisation** (**dashboard and**

**infographic design using Tableau &**

**Microsoft Power BI**).

MSc - specialising in **machine learning, big data and visual analytics technologies**. Experienced at programming in Python with Jupyter Notebook, Hadoop, Spark, R with RStudio, NoSQL, Java and Unix systems.

**2017 Certified Scrum Master® (Credential ID: 000691196)** Scrum Alliance

**2006 MSc in Computer Science** University of Bristol (The Top 28 Universities in the World, 2012)

**Data Science Projects & Highlight Achievements**

**Data Science Projects:**

[**https://github.com/emma-luk/pdf-data-science/blob/master/Emma\_Luk\_A\_selection\_of\_my\_data\_science\_work.pdf**](https://github.com/emma-luk/pdf-data-science/blob/master/Emma_Luk_A_selection_of_my_data_science_work.pdf)

**Data Scientist: Driving Data-Driven Insights for Strategic Marketing Success using Google BigQuery Report:** [**https://github.com/emma-luk/pdf-data-science/blob/master/project-with-BigQuery-emma-luk.pdf**](https://github.com/emma-luk/pdf-data-science/blob/master/project-with-BigQuery-emma-luk.pdf)

**Business Insights at AXA (**[**Appendix 1**](https://github.com/emma-luk/pdf-data-science/blob/master/Emma_Luk_A_selection_of_my_data_science_work.pdf)**)**

* Devised and implemented effective tracking metrics at AXA to monitor online customer behaviours, building models that translated data points into business insights, and using machine learning to accelerate testing and improve the accuracy of recommendation engines, resulting in a 30% increase in incremental revenue.
* Implemented measurement strategies for marketing campaigns, utilising randomised lift tests, geo-targeted lift tests, and marketing mix models to optimise ROI.
* Collaborated with in-house and agency marketers to identify the most effective marketing channels, resulting in enhanced user growth and product success.
* Established and maintained strong relationships with advertising partners and their analytics measurement teams, driving best practices and experimental design.
* Utilised cloud-native data infrastructure, including BigQuery and Looker, to provide comprehensive visibility on channel performance.
* Stayed up-to-date with industry-leading performance marketing measurement strategies, ensuring AXA remains at the forefront of marketing analytics.

Overall, contributions and achievements demonstrate ability to use data analytics and machine learning techniques to drive better decision-making, improve business outcomes, and generate measurable results for clients or employers.

**Data Visualisation in Microsoft Power BI & Tableau (**[**Appendix 3**](https://github.com/emma-luk/pdf-data-science/blob/master/Emma_Luk_A_selection_of_my_data_science_work.pdf)**)**

* Created an executive dashboard using Microsoft Power BI and Tableau to track and report on business metrics and KPIs, providing decision-makers with real-time visibility into business performance and improving overall business outcomes.

**Data Scientist: Driving Data-Driven Insights for Strategic Marketing Success using Google BigQuery (**[**Appendix 4**](https://github.com/emma-luk/pdf-data-science/blob/master/project-with-BigQuery-emma-luk.pdf)**)**

* Conducted an in-depth analysis of 100k orders at Target in Brazil, identifying key relationships between customer, order, seller, payment, review, product, and geolocation datasets. This analysis provided valuable insights for customer segmentation and sentiment analysis.
* Data Scientist: Driving Data-Driven Insights for Strategic Marketing Success using Google BigQuery Report: <https://github.com/emma-luk/pdf-data-science/blob/master/project-with-BigQuery-emma-luk.pdf>