

Oliver Carey

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Education

BSc Mathematics and Statistics (First Class Honours) *September 2019 - July 2022*
Newcastle University, Newcastle, UK
Professional Certificate in Data Analytics (89%) *Issued September 2024*
Imperial College Business School
A-Levels, St Thomas More RC Academy, Newcastle *September 2009 - July 2018*
Mathematics (A); Further Mathematics (A); Physics (A); Business Studies (B)

Professional Experience

Graduate Project Support Officer - NECS Insights and Analytics Team, NHS *July 2023 - Present*

- Designed and implemented data-driven dashboards for the OPTICA (Optimised Patient Tracking and Intelligent Choices Application) programme, streamlining the monitoring of key metrics such as delay days, patient discharges, No Criteria to Reside, admissions, and length of stay. Utilised SQL and Excel to create interactive, user-friendly dashboards, enabling real-time decision-making across peer trusts.
- Developed and deployed a dynamic thresholding solution for the UEC app, enabling real-time monitoring of 111 and 999 calls across hospitals and trusts in NENC. Replaced a black-box predictive model, freeing up resources for the predictive analytics team and delivering £10,000 in annual cost savings. Currently scaling this solution to monitor additional metrics and incorporating predictive analytics into OPEL reporting.
- Facilitated collaboration between technical and non-technical stakeholders by translating complex data insights into actionable recommendations. Presented live demos to equip teams with the skills needed for data-driven decision-making.
- Completed NECS internal development programme, acquiring skills in leadership, presenting, and continuous improvement. Earned PRINCE2 Foundation certification and applied these skills to lead initiatives that ensured timely project delivery and adoption of best practices.
- Developed the "Community of 1000" Power BI dashboard, which tracks key health indicators across diverse demographics. Integrated multiple data sources to provide stakeholders with a holistic view of community health and support evidence-based decision-making.
- Adapted quickly to evolving project requirements and demonstrated problem-solving skills in high-pressure environments, consistently delivering high-quality outcomes within tight timelines.

Career Break - Backpacking Around Asia *August 2022 - June 2023*

- Travelled solo through five countries in Asia, navigating diverse and challenging environments.
- Developed adaptability by adjusting to new cultures, languages, and logistics, which enhanced my ability to problem-solve in fast-paced, unfamiliar settings.
- Strengthened cross-cultural communication skills by interacting with people from diverse backgrounds, improving my ability to collaborate with global teams.
- Gained resilience and independence, traits that have carried over into my professional work, enabling me to effectively manage multiple projects under pressure and navigate complex tasks.
- The experience equipped me with a global perspective, improving my critical thinking and decision-making skills, which are vital for data science roles in dynamic and fast-changing industries.

Various Roles during University *2018 - 2021*

- **Front of House, Tyneside Golf Club** *January 2020 - March 2021*
Developed strong customer service and communication skills by interacting with guests, managing bookings, and ensuring a high standard of service. Demonstrated adaptability by balancing multiple tasks in a fast-paced environment while consistently maintaining attention to detail and professionalism.

- **Mathematics Ambassador, Newcastle University** *June 2021 - September 2021*
Strengthened public speaking and presentation skills by delivering mathematics workshops and mentoring students. Collaborated with university staff and peers to promote engagement in STEM subjects, demonstrating leadership and the ability to convey complex concepts in a simple, accessible manner.
- **Brand Ambassador, N20** *September 2018 - December 2020*
Developed marketing and promotional skills by representing various brands at events and exhibitions. Enhanced relationship-building and persuasion abilities through direct interaction with potential customers, while demonstrating organisational skills by managing logistics for events and product launches.

Skills

- **Programming Languages:** Python, R, SQL
- **Libraries and Frameworks:** Pandas, NumPy, Scikit-learn, TensorFlow, XGBoost, Matplotlib, Seaborn, Plotly
- **Data Science Methods:** Classification, Regression, Clustering, Predictive Analytics, Natural Language Processing (NLP), Dynamic Thresholding
- **Tools:** Power BI, RStudio, Tableau, Jupyter Notebooks, Excel, Git
- **Database Management:** MySQL, PostgreSQL
- **Project Management:** PRINCE2 Foundation, Stakeholder Engagement, Continuous Improvement, Agile Methodologies
- **Soft Skills:** Communication, Leadership, Problem-Solving, Adaptability, Teamwork

Certifications

Technical Certifications

- **Professional Certificate in Data Analytics**, Imperial College Business School *Issued Sep 2024*
- **15 Days of Power BI - Complete Microsoft PowerBI Bootcamp**, Udemy *Issued Jun 2023*
- **Google Data Analytics Certificate**, Coursera *Issued Feb 2023*
- **SQL - MySQL for Data Analytics and Business Intelligence**, 365 Careers *Issued Apr 2021*

Project Management Certifications

- **PRINCE2 Foundation**, PeopleCert *Issued Dec 2023, Expires Dec 2027*
- **Deeply Practical Project Management**, Udemy *Issued Jul 2023*
- **Understanding Agile - Complete Guide for Beginners**, Udemy *Issued Jul 2023*
- **Management and Leadership - Modern Leaders Training**, Udemy *Issued Jun 2023*
- **The Project Management Course: Beginner to PROject Manager**, Udemy *Issued Jun 2023*

Projects

RShiny App for Word Clouds using NLP

[GitHub Link](#)

- Developed an interactive RShiny app that utilises natural language processing techniques to create dynamic word clouds from user-input text data.
- Enhanced text analysis capabilities by applying tokenisation and NLP techniques, enabling users to generate meaningful visualisations.
- Created a tool that allows for exploratory analysis and visualisation of unstructured text data, improving insights for users.
- Implemented for NHS Culture and Leadership Training Evaluation and Doncaster FT Thematic Incident Report, providing valuable insights through text analysis.

House Prices - Advanced Regression Analysis

[GitHub Link](#)

- Built a regression model to predict house prices as part of a Kaggle competition, using advanced feature engineering and handling missing data.
- Optimised model performance by applying various machine learning algorithms, including Ridge and Lasso regression.
- Achieved high predictive accuracy by enhancing the model through feature selection and hyperparameter tuning, providing actionable insights into housing price determinants.

Titanic - Machine Learning from Disaster

[GitHub Link](#)

- Developed a classification model to predict passenger survival on the Titanic, using feature engineering and data preprocessing.
- Tested multiple machine learning algorithms, including Logistic Regression, Random Forest, and SVM, to identify the most accurate model.
- Improved model accuracy by applying cross-validation techniques and feature importance analysis, offering insights into the factors influencing survival rates.

Sentiment Analysis Using Machine Learning Methods

[GitHub Link](#)

- Built a sentiment analysis model to classify IMDb movie reviews as positive or negative using machine learning techniques.
- Compared four models: Logistic Regression, Support Vector Machine (SVM), Random Forest, and XGBoost, assessing each model using key metrics (accuracy, precision, recall, F1-score).
- Identified the best-performing model (XGBoost), with an accuracy rate of over 85 percent, providing insights into sentiment patterns in movie reviews.

Interests

Sports and Fitness: Road Cycling, Surfing, Swimming, Hiking, Football (University Clubs), Running (University Running Clubs), PADI Advanced Scuba Diver

Travel and Adventure: Backpacking, Cycling Tours, Exploring New Destinations, Music Festivals, Cultural Immersion