

# TYLER CARTWRIGHT

Data Engineer | Machine Learning Engineer | Software Engineer

[Portfolio](#) | [LinkedIn](#) | [GitHub](#)

## PROFESSIONAL SUMMARY

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Results-driven Software Engineer with expertise in Data Engineering, Machine Learning, and Full Stack Development. Demonstrated success in developing innovative solutions for financial crime prevention and process automation. Strong track record of solo project delivery and research in machine learning applications.

## PROFESSIONAL EXPERIENCE

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### DATA ENGINEER - ECONOMIC CRIME PREVENTION

*Lloyds Banking Group | September 2024 - Present*

- Engineer data pipelines using Google Cloud Platform and BigQuery for processing banking transaction data
- Develop Python and Java applications for data transformation and analysis
- Collaborate with Data Scientists and Analysts to optimize data accessibility and quality
- Contribute to machine learning initiatives for fraud detection and prevention

### SOFTWARE ENGINEER & PROJECT LEAD

*Prestwold Hall | November 2024 - Present*

- Successfully adapted and deployed the venue management system for a second prestigious location
- Implemented venue-specific branding and customization requirements
- Executed comprehensive system testing and staff training programs
- Established secure on-premise deployment
- Demonstrated system scalability and reusability across different venue environments

### SOFTWARE ENGINEER & PROJECT LEAD

*Hodsock Priory | June 2024 - September 2024*

- Independently designed and implemented a complete staff management and accounting system
- Built scalable React frontend with Node.js/Express backend and MongoDB database
- Reduced administrative overhead by 70% through process automation
- Implemented secure authentication and role-based access control
- Successfully delivered project on time and within budget constraints

### SOFTWARE ENGINEERING INDUSTRIAL PLACEMENT

*Lloyds Banking Group | June 2022 - September 2023*

**Cloud Infrastructure Engineer**

- Managed critical mortgage platform infrastructure using Azure and Kubernetes
- Implemented CI/CD pipelines for automated deployment and testing
- Maintained high availability and performance of cloud services
- Collaborated with cross-functional teams to optimize infrastructure costs

**Full Stack Engineer**

- Modernized legacy applications using React and .NET technologies
- Developed RESTful APIs in C# for mortgage broker applications
- Implemented responsive user interfaces following accessibility standards
- Participated in agile development cycles and code reviews

**EDUCATION**

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**BSc Computer Science (First Class Honours)**

*University of Derby | 2020 - 2024*

- Dean's Award for Academic Excellence (2020-2024)
- Focus areas: Data Science, Machine Learning, Software Engineering

**A-Levels**

- Computer Science (A\*)
- Mathematics (A\*)
- IT & Software Development (Distinction\*)

**RESEARCH PROJECTS**

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**From Posts to Profits - Social Media Impact Analysis**

- Developed sentiment analysis system using FinBERT and MemeBERT models
- Analyzed correlation between social media sentiment and stock market movements
- Technologies: Python, Natural Language Processing, Financial Analysis
- Project available at: [github.com/tyler-carty/social-media-sentiment](https://github.com/tyler-carty/social-media-sentiment)

**Healthcare ML Innovation - Pneumonia Detection**

- Achieved 90% accuracy in pneumonia detection from X-ray images
- Implemented Explainable AI (XAI) for result interpretation
- Technologies: Neural Networks, Computer Vision, XAI
- Project available at: [github.com/tyler-carty/pneumonia-ml-xai](https://github.com/tyler-carty/pneumonia-ml-xai)

**TECHNICAL SKILLS**

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**Programming Languages**

- Python
- Java
- JavaScript
- C#
- TypeScript

**Web Technologies**

- React
- Node.js
- Express.js
- .NET
- RESTful APIs

## Cloud & DevOps

- Google Cloud Platform
- Microsoft Azure
- Kubernetes
- CI/CD
- Docker

## Data & ML

- BigQuery
- MongoDB
- Machine Learning
- Neural Networks
- Computer Vision

## ACHIEVEMENTS

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- Successfully delivered solo full-stack project that improved business efficiency by 70%
- Achieved First Class Honours in Computer Science with consistent Dean's Awards
- Developed ML model with 90% accuracy for medical diagnosis
- Contributed to critical financial infrastructure serving millions of customers

## SOFT SKILLS

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- Project Management
- Problem Solving
- Technical Leadership
- Cross-functional Collaboration
- Independent Working
- Research & Analysis