

# Timothy-Joseph Godwin

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## Education

**University of Birmingham** Sept 2023 – present  
M.Eng Computer Science with Software Engineering Birmingham, UK

- **Relevant Coursework:** Data Structures & Algorithms, Object Oriented Programming, Software Engineering and Professional Practices, Team Project, Artificial Intelligence, Operating Systems & Systems Programming

**Kaplan International College, London** Jan 2023 – June 2023  
Foundation Certificate in Science and Engineering London, UK

- **Relevant Coursework:** Mathematics, Information Technology, Extended Project (Research)

## Experience

**London Success Academy** Sept 2025 – Oct 2025  
Data Engineering Intern London, UK

- Built enterprise-scale ETL pipeline processing 300,000+ records using Python, Apache Spark, and GCP, achieving 80% storage optimisation through Parquet format with real-time API integration
- Orchestrated production data workflows using Apache Airflow on Google Cloud Composer with automated scheduling, BigQuery metadata tracking, and data validation ensuring 99%+ pipeline reliability
- Designed BigQuery data warehouse with partitioned/clustered tables processing \$15.3M transaction volume across 5 currencies, implementing query optimisation reducing costs by 80% through partition pruning
- Deployed distributed Apache Spark processing on GCP Dataproc cluster, scaling from single-machine to 3-node architecture, processing 95,000+ clickstream events and 50,000+ financial transactions with zero data loss

**Uptrail** July 2025 – Aug 2025  
Data Analysis Intern London, UK

- Cleaned and analysed 2,992 sales records across 499 customers to identify top loyalty tiers and delivery optimisation opportunities (41% delay reduction potential) through 6 data visualisations and strategic analysis
- Developed Scikit-learn logistic regression model on 1,494 streaming customers achieving 76.6% accuracy, identifying mobile usage and geographic patterns as key churn drivers for targeted retention strategies
- Created interactive Tableau dashboard integrating 3 datasets (15,822 records) with 6 calculated KPIs, enabling executive strategic planning through geographic mapping and customer segmentation analysis

## Projects

**Campus Events Web Application** *JHipster, Angular, PostgreSQL*

- Developed a full-stack web application for university students to discover and review campus events and societies as part of a 7-member team using Agile methodologies
- Led CI/CD pipeline implementation using Azure for deployment, Docker containerisation, and GitHub Actions runners
- Engineered RESTful APIs with Spring Boot and resolved database migration issues using Liquibase

**Network Firewall Program** *C, Networking, Threading*

- Built multithreaded firewall server using pthreads with mutex synchronisation, supporting concurrent client connections and dual-mode operation (interactive CLI and IPv6 network server)
- Implemented linked-list rule management system supporting Add/Delete/List/Check operations for IP and port filtering
- Created IP validation using inet\_pton() and byte conversions for precise range matching and connection control

## Technical Skills

**Programming Languages:** Python, SQL, Java, JavaScript, TypeScript, C, Haskell, PowerShell

**Data Engineering & ML:** PySpark, Apache Spark, Pandas, NumPy, Scikit-learn, Tableau, ETL Pipelines

**Web Technologies:** React, Angular, Spring Boot, HTML/CSS, Bootstrap, Express.js, Node.js, REST APIs

**Cloud & Databases:** BigQuery, Apache Airflow, GCP (Storage, Dataproc, Composer), AWS, Docker, GitHub, Azure

## Additional Information

**Languages:** English (C1), Igbo (Native), Spanish (A1)

**Achievements:** 2023/24 UG Outstanding Achievement Award (SRM Funded); Silver medallist in state-level Physics and Mathematics Olympiads; Top 3 graduating student & Best Student in Further Mathematics (British Spring College)