Glawin Alva

Data Engineer | AI & Business Strategy Graduate | Building Scalable, Data-Driven Solutions

+44 7341704465 | glawin24@gmail.com | Birmingham, United Kingdom | LinkedIn | GitHub | Website

SUMMARY

Versatile and solution-focused Full Stack Software Engineer with a **Master's in Artificial Intelligence and Business Strategy** from **Aston University (Distinction)**. Experienced in building and deploying an **end-to-end portfolio website**, demonstrating hands-on skills in **frontend and backend development**, **REST APIs**, **responsive UI design**, and **deployment workflows**. Proficient in **JavaScript**, **React**, **Node.js**, **Python**, and **SQL**, with familiarity in **cloud platforms** like **AWS**, **Firebase**, and version control using **Git**. Delivered academic and personal projects in **fraud detection**, **energy forecasting**, and **customer segmentation**, blending **machine learning** with real-world applications. Passionate about developing **user-centric, scalable web solutions** and continuously growing technical depth in full stack and **AI-powered systems**.

TECHNICAL SKILLS

- **Operating Systems:** Windows, Linux/Unix
- **Programming Languages:** Python, Java, C++, SQL (PL/SQL, T-SQL including Database Management Languages: DDL, DML, DCL, TCL)
- **Machine Learning & AI:** PyTorch, Hugging Face, BERT, Deep Learning, NumPy, Pandas, Scikit-learn
- **Data Tools & Visualization:** SQL, Power BI, Google Looker
- **Data Architecture & Governance:** Data Modeling, Data Integration, Data Quality, Taxonomies, Metadata Management, Data Policies & Standards
- **Data Management & Processing:** Data Lifecycle Management, ETL, Data Lakes, Apache PySpark, Pentaho
- **Databases:** MySQL, PostgreSQL, Greenplum, Firebase
- **Cloud Platforms:** AWS (Lambda, SageMaker - Learning)
- **Soft Skills:** Strategic Thinking, Collaboration, Communication, Problem-Solving, Leadership, Innovation, Decision Making, Motivation, Enthusiasm, Multi-Tasking, Fluent in English

WORK EXPERIENCE

Senior Software Developer
Jun '25 - Present

VeritaPort
Birmingham, United Kingdom

Collaborating on Verigo, a gamified navigation app that rewards users for eco-friendly travel and local exploration through point-based challenges and real-world rewards.

- Contributing to the app's **core architecture** and **MVP** using **React Native**, **Node.js**, **PostgreSQL**, and **TomTom/Google Maps APIs**.
- Implementing **user-facing features**, **in-app logic**, and **challenge systems** to support **XP tracking**, **badges**, and **reward mechanisms**.
- Assisting in developing **user profiling features** and **scalable logic** to enable **early-stage rollout** and **pilot testing** with **100+ users**.
- Collaborating with the **tech lead** and **product team** on **implementation**, **debugging**, and aligning development work with **product goals**.
- Participating in **roadmap discussions**, contributing to **feature prioritization**, **analytics setup**, and **CI/CD workflow improvements**.

Associate IT
Aug '22 - Aug '23

Tata AIG
Mumbai, India

Tata AIG General Insurance Company Limited is a joint venture between the Tata Group and American International Group, Inc. (AIG) that offers a variety of insurance services in India

- **Performed data cleaning and preprocessing** on large datasets, transforming over 100,000 records to improve data quality and accuracy.
- **Developed and maintained a scalable Data Lake Project** using Apache **PySpark** and **PostgreSQL** Greenplum for efficient data storage and retrieval.
- **Implemented task scheduling and automation** using **Pentaho** to enhance data pipeline efficiency and reduce manual intervention.
- **Collaborated with Information Management teams** to understand project requirements and develop scalable data solutions within best practice coding frameworks.
- **Created and maintained data visualizations and dashboards** to facilitate data-driven decision-making and improve business insights.

- **Participated in cross-functional team meetings and project planning**, ensuring adherence to timelines and successful execution of data initiatives.

PROJECTS

UK Predictive Analysis and Anomaly Detection in Household Electric Power Consumption

Jun '24 - Sep '24

Aston University United Kingdom

- **Description**: Developed an **integrated system** combining **energy forecasting** with **anomaly detection** using a **hybrid LSTM and Stationary Wavelet Transform (SWT)** model. Applied **deep learning** on **UCI household energy** data for **time-series forecasting**, and implemented anomaly detection using **Isolation Forest**, **Autoencoders**, **One-Class SVM**, and **Local Outlier Factor (LOF)** on the **LEAD1.0 commercial** dataset.
- **Tools**: **Python**, **TensorFlow**, **Scikit-learn**, **Pandas**, **SWT**, **LSTM**, **SMOTE**
- **Impact**: Improved **forecasting accuracy** (**RMSE: 0.022**), and enabled **real-time detection** of anomalous consumption patterns for **smarter energy management**.**(GitHub)**

Big Data For UK Road Safety Risk Prediction for Insurance Premium Adjustments

May '24 - May '24

Aston University United Kingdom

- **Project Overview**: Built a **machine learning framework** using the **UK DfT 2023 Road Casualty dataset** to predict **collision severity** (Slight, Serious, Fatal) for **policy planning** and **insurance pricing**. Processed over **6,000 records** across **36 features**, performing **exploratory data analysis (EDA)**, **outlier detection**, and **class balancing**. Trained and evaluated **Random Forest** and **LightGBM** models, improving **LightGBM accuracy from 68% to 75.4%** through **hyperparameter tuning**. Identified key predictors such as **road type**, **lighting conditions**, and **casualty count**, and developed **risk probability thresholds** to generate **actionable insights** for **targeted safety interventions**.
- **Tools & Technologies**: **Python**, **Pandas**, **Scikit-learn**, **LightGBM**, **Matplotlib**, **Seaborn**, **Jupyter Notebook**
- **Impact**: **Improved the predictive performance of road collision models from 68% to 75.4% accuracy**, enabling **data-informed policymaking** and **targeted safety interventions** to better prevent **high-severity outcomes** in urban transport. **(GitHub)**

UK E-Commerce Customer Segmentation and Fraud Detection

Nov '23 - Nov '23

Aston University Birmingham, United Kingdom

- **Description:** Built an end-to-end ML pipeline combining **customer segmentation**, **fraud detection**, and **reinforcement learning** to uncover insights and mitigate risk in e-commerce transactions. Utilized clustering, classification models, and dimensionality reduction techniques.
- **Tools & Technologies**: **Python**, **Scikit-learn**, **Random Forest**, **Gradient Boosting**, **K-Means**, **PCA**, **Factor Analysis**, **Custom MDP**
- **Impact**: Achieved **99.67% fraud detection accuracy**, **90% precision**, and **81% recall** using Random Forest; segmented **118,929 transactions** into **4 behavior clusters**; optimized decision strategies via **reinforcement learning simulations**.**(GitHub)**

EDUCATION

Master of Science (M.S.) - Artificial Intelligence and Business Strategy

Sep '23 - Sep '24

Aston University Birmingham, United Kingdom

Aston University is ranked 22nd in the UK in the Guardian University Guide, 2023.

Achieved Distinction (70%)

Bachelor of Science in Information Technology

Jun '18 - May '20

University of Mumbai Mumbai, India

University of Mumbai is one of the oldest and premier Universities in India.It is one of the largest university systems in the world with over 549,000 students on its campuses and affiliated colleges

Achieved Distinction (8.02/10 CGPA).

Certification in Cloud and Mobile Software Engineering (GNIIT)

Jun '20 - Jun '21

National Institute of Information Technology (NIIT) Mumbai, India

NIIT Ltd is a leading global talent development corporation that offers learning and knowledge solutions across various industries.

Achieved Distinction (Graded Excellent, Equivalent to 8-10 CGPA).