5. Team Collaboration & Project Reflection

Team Roles & Division of Work

Our team divided responsibilities based on expertise and interest to ensure efficient execution and quality outcomes:

Team Member	GitHub Handle	Responsibilities
Aqsa Shabbir	AqsaShabir12	Performed **Statistical Insights**: SARIMA forecasting, Regression Analysis, ANOVA.
Swathik	swathik-07	Designed and implemented **Data Modelling & Architecture** (Star Schema).
Juan Correa	j-s-correa	Developed **Dashboards**: Compliance, Performance, Engagement, Accessibility views.
Olajide	olajide	Assisted in **Data Modelling and Data Validation** for schema consistency.

Collaboration Approach:

- Tasks were allocated considering individual strengths and learning goals.
- Statistical modeling was assigned to Aqsa due to prior experience with analytics.
- Swathik and Olajide collaborated on designing a robust data model.
- Juan led visualization and storytelling using Tableau Public.

Strengths & Contributions

- **Aqsa:** Brought advanced statistical skills, producing actionable insights through SARIMA, regression, and ANOVA.
- **Swathik:** Ensured the analytical backbone by designing a scalable star schema for Power BI/Tableau.
- **Juan:** Delivered compelling dashboards, translating raw data into visually rich, actionable insights.
- **Olajide:** Provided key support in validation and ensuring data integrity for the model.

Weaknesses & Gaps

- Limited prior experience with **predictive analytics in business contexts**, requiring extra time for research.
- Tableau story-building was initially challenging for Juan, addressed through self-learning and team feedback.

Team Workflow & Communication

- **Methodology:** Agile with weekly sprints and task reviews.

- **Collaboration Tools:**

    o **Slack:** Daily updates and discussion.

- Evidence: Screenshots of Trello boards and Slack chats (to be attached in the appendix).

Challenges Faced

- **Technical:** Handling missing values in training dates; resolved via custom imputation logic.

- **Visualization Issues:** Achieving clarity in dashboards (e.g., Accessibility Overview charts) required multiple iterations.

- **Time Constraints:** Balancing advanced statistical modelling with dashboard delivery.

Resolution: Regular check-ins, resource sharing, and peer learning sessions.

Lessons Learned

- **Importance of Clear Data Models:** Well-defined schemas accelerate dashboard development.

- **Effective Communication:** Frequent sync-ups prevented blockers from escalating.

- **Storytelling Matters:** Insights are impactful only when visualized clearly for decision-makers.

What We'd Do Differently:

- Start statistical modelling earlier to allow for deeper model validation.

- Standardize naming conventions at the very beginning to avoid rework.