MAIN DATA ANALYTICS TOOL STACK FOR THE EDTECH PLATFORM

Submitted by: Tejumola Adeniran

Role: Data Analyst

Date: 8th August 2025

1. **Data Collection: Google Analytics (GA4)**
   Why: Captures platform usage patterns; who's logging in, what features are used most, and where drop-offs happen.
   Integration: Add G4 tracking code into the site so data can flow automatically into my GA dashboard.

2. **Data Storage: SQLite**
   Why: Lightweight, simple and I am very familiar with it.
   Integration: Platform backend writes all structured data (user records, grades, logs) into SQLite tables.

3. **Data Analysis & Visualization: Tableau**
   Why: Industry-standard for creating interactive dashboards and clear visual insights.
   Integration: Connect Tableau directly to SQLite (or its exports) for live or periodic data updates.

4. **Reporting and Collaboration: Google Data Studio (Looker Studio)**
   Why: Lets me share dashboards with non-technical stakeholders without them installing software.
   Integration: Pull data from Tableau exports or CSV files and shares link with the team.

HOW THEY WORK TOGETHER (EXAMPLE FLOW)

1. **GA4** tracks and logs student/lecturer behavior.
2. Platform backend stores activities & academic data in **SQLite**.
3. **Tableau** connects to SQLite for deep analysis & dashboards.
4. **Looker Studio** shares simplified versions of those dashboards with management.

FLEXIBILITY CLAUSE

While these are my primary tools, I can navigate to alternative solutions when necessary. For instance, if Tableau experiences an issue, I could temporarily switch to **Power BI** to complete urgent tasks while troubleshooting Tableau. This ensures continuity and efficiency, regardless of technical setbacks.