BI Developer Assessment – Take-Home (2 Days)

Objective

Evaluate the candidate's ability to:

- Design and implement interactive dashboards using open-source BI tools.
- Connect to structured data sources (Excel/CSV or database).
- Apply data modeling and visualization best practices.
- Deliver a working dashboard with clear documentation and reproducibility.

General Guidelines

You are encouraged to use open-source BI tools and libraries such as:

- Dashboarding: Apache Superset, Metabase, Redash. You can also use Microsoft Power BI if you are not comfortable with Open Source.
- Data Transformation: dbt, Pandas
- Database: PostgreSQL, DuckDB
- Visualization: Plotly, Vega-Lite
- PDF Parsing: pdfplumber, Camelot
- Include a README with setup instructions and screenshots.
- Focus on clarity, usability, and maintainability.
- Share your work via GitHub or Docker Compose for reproducibility.

Assessment Details:

- **Date:** 13th to 15th December 2025
- **Duration:** 50+ hours
- **Format:** Project-based assessment. The assessment will be shared on 13th December 2025 and must be submitted on or before 11:59 PM on 15th December 2025.

Submission Instructions:

1. **Project Link:** Share a link to your completed project via **GitHub, Google Drive, or any similar platform**.
2. **Video Demo:** Record a **live video demonstration** explaining your work and approach and upload it to **WeTransfer** or Google Drive or any other. Send the WeTransfer link to **zeeshan.m@growzd.com**.
3. **Submit before** 11:59 PM on 15th Dec 2025.

Task 1: Sales Performance Dashboard

Overview:

You will be provided with a sales data set in Excel format. Build an interactive dashboard using open-source BI tools that answer key business questions.

Requirements:

Connect to the Excel file or load it into a database (PostgreSQL/DuckDB).

Create visualizations for:
- Total sales by brand/month.
- YoY comparison for selected products.
- Active stores by region.
- Include filters (brand, date range, region).
- Provide at least 5 charts (bar, line, and one summary KPI card).
- Bonus: Add drill-down capability and dashboard theming (light/dark mode).

Task 2: Procurement Discrepancy Report

Overview:

You will be provided with two PDFs: purchase orders and proforma invoices. Extract relevant data, compare, and visualize discrepancies in the dashboard.

Requirements:
- Extract structured data from PDFs using pdfplumber or Camelot.
- Compare quantity ordered vs invoiced and order value vs invoice value.
- Highlight mismatches in a table visualization.
- Bonus: Add alerts for major discrepancies (>5% variance) and include a downloadable CSV report.

Evaluation Criteria
- Dashboard usability and clarity.
- Data modeling and transformation quality.
- Visualization best practices (color, labeling, interactivity).
- Accuracy of PDF data extraction and comparison.
- Documentation and reproducibility.
- Creativity and bonus features.

Open-Source Requirement
- Use at least three of the following (justify choices in README):
- Apache Superset / Metabase / Redash
- PostgreSQL / DuckDB
- dbt / Pandas
- pdfplumber / Camelot
- Plotly / Vega-Lite
- Docker Compose for reproducibility

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Examples of Dashboard – Below covers more metrices but you need to focus on creating dashboard for sales and active stores only. Below images are just given for reference where you can design your own dashboards completely different.