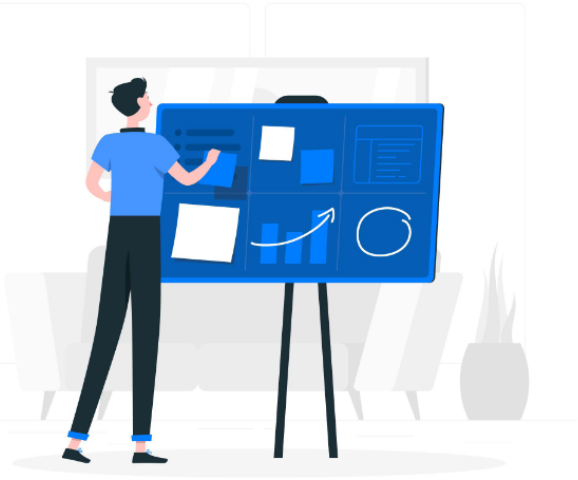
Data Analytics and Visualization Boot Camp Graduation Project Profile

JobPulse Dashboard Project

1. General Description of the Project

Imagine you're a BI Analyst racing against the clock (10 days!) to launch the JobPulse Dashboard. You'll wrangle the Wuzzuf job-posting data in Excel Power Query, sculpt five distinct visuals from KPI cards and column charts to pie, map, and line graphs sprinkle in slicers for Career Level and Work Mode, then piece it all together on one interactive Power BI page. Finally, you'll publish and schedule refreshes so your team can explore hiring trends in real time all without breaking a sweat!



2. Your Squad Objectives

- **Import** the Wuzzuf job-postings dataset using Excel Power Query and clean/transform the data.
- **Build** a one-page Power BI dashboard with five distinct visuals (KPI card, column chart, pie chart, map, line chart).
- **Design** slicers and filters for Career Level, Work Mode, and Date to let users explore dynamically.
- **Implement** and evaluate the dashboard's interactivity and performance through simple user test scenarios and metrics then document them.
- **Publish** to Power BI Service and schedule automatic data refresh for real-time insights. **[Extra Mile]**
- **Embed** the dashboard in a SharePoint page or web portal for team access. **[Extra Mile]**

4. Toolbox at Your Fingertips

- **Wuzzuf-Job-Posting.xlsx dataset** – your raw job-postings goldmine.
- **Excel with Power Query** – clean, shape, and prep your Wuzzuf data.
- **Power BI Desktop** – build your data model, create measures, and craft those five visuals.
- **Power BI Service** – publish your report, set up scheduled refreshes, and share with the team. **[Extra Mile]**
- **Web Browser** – access Power BI online, tweak filters, and embed your dashboard wherever you like. **[Extra Mile]**

5. Functional Requirements

5.1 Excel → Power Query Prep

- **Requirement Details:**
    - **Load the Data**
        - Open `Wuzzuf-Job-Posting.xlsx` in Excel
        - Go to **Data → Get Data → From File → From Workbook** and point to your file.
    - **Clean & Shape**
        - **Remove blanks** in the whole table.
        - **Split "Skills"** into a separate table if you want to count by skill later (Home → Split Column by Delimiter).
        - **Extract Year/Month** from `Posted Time` (Add Column → Date → Year/Month).
    - **Load to Data Model**
        - Once clean, click **Close & Load To… → Only Create Connection + Add to Data Model**.
- **Deliverables:**
    - **A Power Query setup file (or Excel workbook)** showing your cleaned and transformed tables, with steps documented (blank rows removed, dates standardized, Skills split, Year/Month columns added).

5.2 Power BI Data Model

- **Requirement Details:**
    - **Connect to Your Excel Query**
        - In Power BI Desktop: **Get Data → Excel** and select your workbook's Power Query connection.
    - **Verify Relationships**
        - If you **split** out Skills, link Job Postings → Skills Table on your unique key (e.g., Job Title + Company)
    - **Create Measures**
        - Total Postings: COUNTROWS('Jobs')
        - Average Experience: AVERAGE('Jobs'[Years of Experience Numeric])
        - Any other KPI you like (e.g., % Remote vs On-Site).
- **Deliverable:**
    - **A .pbix file containing:**
        - All tables loaded from your Excel queries
        - Defined relationships (e.g. Job Postings ↔ Skills)
        - DAX measures (Total Postings, Avg. Experience, etc.)

5.3 One-Page Dashboard Layout

- **Requirement Details:**
    - Arrange five visuals on a single page—make it glance-friendly, filter-powered, and interactive:

Visual #	Type	What It Shows
1	Card (KPI)	Total Job Postings
2	Clustered Column Chart	Postings by Category
3	Pie Chart	Breakdown of Job Type (Full-Time etc.)
4	Map	Geo-distribution by Country (or City)
5	Line Chart	Postings Over Time (by Month/Date)

- **Deliverable:**
    - **A single-page report in your .pbix file featuring five visuals:**
        - KPI card for Total Postings
        - Clustered Column Chart (Postings by Category)
        - Pie Chart (Job Type breakdown)
        - Map (Geo-distribution)
        - Line Chart (Postings over Time)

5.4 Filters & Slicers

- **Requirement Details:**
    - Slicer for Career Level (Entry, Experienced, etc.)
    - Slicer for Work Mode (On-Site, Remote, Hybrid)
    - **Filter pane:** add Posted Month/Year filter to let users zoom in on specific periods
- **Deliverable:**
    - **Slicer visuals** on your report for Career Level and Work Mode
    - A **Date/Month-Year** slicer or filter pane configured for dynamic period selection

5.5 Dashboard Evaluation

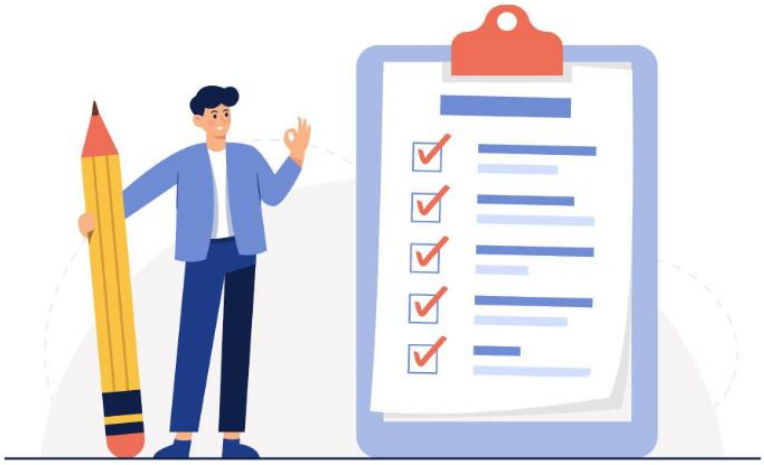
Requirement Details:

- **What to Track:**
    - **3 users** clicks, filters, changes, and drill-down on the dashboard.
- **Session Timing:**
    - Record when a user's session starts (first interaction timestamp) and ends (last interaction timestamp) for the 3 users.
- **Calculation Logic:**
    - **TotalInteractions = count of all interactions in a session**
    - **SessionDurationMinutes = (LastInteractionTime – FirstInteractionTime) in minutes**
    - **ActionsPerMinute = TotalInteractions ÷ SessionDurationMinutes**

- **Deliverable:**
    - **DAX Measure added to your .pbix file, for example:**
        - ActionsPerMinute = TotalInteractions ÷ SessionDurationMinutes

5.6 Deploy & Share [Extra Mile]

- **Requirement Steps:**
    - **Publish to Power BI Service:**
        - File → Publish → select your workspace.
    - **Set Up Scheduled Refresh**
        - In the Power BI dashboard online, configure your Excel data source to refresh daily or weekly.
    - **Share** the dashboard link with your team or embed it in a SharePoint page.
- **Deliverable:**
    - Published report link from Power BI Service
    - Screenshot of your scheduled refresh settings
    - Embed code or SharePoint embed link so your team can access the live dashboard seamlessly.



6. Non-Functional Requirements

1. Performance

- **Dashboard Load Time:**
  - The report should fully render in **under 3 seconds** on first load and on any filter/slicer change.

2. Easy to Use

- **User Interface:**
  - The UI should feel natural for everyone, whether you're a tech wizard or totally new—no guesswork required.
  - Follow **WCAG 2.1** so people with any ability can join the conversation. **[Extra Mile]**

3. Maintainability

- **Modular Design:**
  - Organize your Power Query steps, data model, measures, and visuals into clearly named, self-contained pieces—so swapping out a table or tweaking a measure never breaks the whole report.

7. Final Deliverables

✔️**Clean `.pbix` & `.xslx` File** with modular queries and well-named components.

✔️**/ Folder** containing:

- `ARCHITECTURE.pdf` (diagram + flow explanation)
- `DATA_DICTIONARY.xslx` (field & measure definitions)

✔️ **Documentation:** Write up neat report for the project.