Credentially BI Tech Assignment - Documentation

Author

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GitHub: https://github.com/UgoEze-Dev-BI/credentially-bi-tech-assignment

1. Objective

To analyze and visualize the reference request process at Credentially, focusing on:

- Status lifecycle of references (Requested > Submitted > Approved/Declined)

- Speed of completion

- Approval outcome rates

- Breakdown by job position, assigned user, and tags

2. Dataset Overview

The project uses structured JSON and `.tmdl` files provided in a pre-prepared semantic model.

Key Tables:

- ref_references: Contains reference records and statuses

- ref_job_positions: Metadata on job positions

- ref_assigned_to: Info about who is assigned to positions (optional)

- ref_user_tags: Tags assigned to jobs or users (optional)

- Dates: Calculated date table used for time intelligence

Cleaning & Transformation:

- Expanded nested JSON records

- Ensured column data types (dates, strings, numerics)

- Addressed duplicate Job Position IDs

- Created clean star schema relationships

3. Measures (DAX)

Built meaningful DAX measures for tracking key performance:

- Total References = COUNTROWS(ref_references)

- Submitted References = COUNTROWS(FILTER(ref_references, ref_references[ref_approval_status] = "Submitted"))

- Approved References = COUNTROWS(FILTER(ref_references, ref_references[ref_approval_status] = "Approved"))

- Declined References = COUNTROWS(FILTER(ref_references, ref_references[ref_approval_status] = "Declined"))

- Approval Rate (%) = DIVIDE([Approved References], [Submitted References])

- Avg Days Requested to Completed = AVERAGE(ref_references[requested_to_completed_days])

Also implemented:

- Rolling 30-day trends

- Time-series breakdown by month

4. Dashboard Design

Tool Used: Power BI Desktop

Layout:

- Top Row: KPI cards for Total, Submitted, Approved, Declined, Approval Rate

- Mid Section:

- Reference Lifecycle Bar (funnel-style)

- Approval Outcome Pie Chart

- Bottom Row:

- Line Chart: Approved References Over Time

- Line Chart: Average Days to Completion Over Time

Filters Panel:

- Year (from Dates table)

- Month

- Approval Status

- Assigned To (ref_assigned_to)

- Role (from ref_user_tags)

Conditional Formatting:

- Applied to requested_to_completed_days

- Green: 0-2 days

- Yellow: 3-5 days

- Red: 6+ days

5. GDPR Compliance

- "Assigned To" field may include internal recruiter or reviewer names.

- The report assumes internal use only for GDPR compliance.

- Recommendation for production: apply Row-Level Security to restrict access by role.

6. GitHub Version Control

- Repo forked from: iplotnikov-telemedicine/credentially-bi-tech-assignment

- Commit history tracks meaningful steps:

- Semantic model fixes

- Dashboard integration

- README creation and cleanup

- Duplicate file (README.md.txt) removed

7. Submission Details

GitHub Repo:

https://github.com/UgoEze-Dev-BI/credentially-bi-tech-assignment

Files Delivered:

- Credentially_References_Dashboard.pbix

- Updated README.md

- Semantic model and data files

8. Conclusion

This Power BI solution meets all requested objectives, providing clear insight into the reference review process. The interactive dashboard empowers internal users to monitor performance, detect delays, and optimize team assignment and hiring flow.