

Data and Artificial Intelligence

Cyber Shujaa Program

Week 5 Assignment

HR Dashboard in Tableau

Student Name: Keneth Origa
Student ID: CS-DA01-25084

Introduction

This week's assignment focused on designing an interactive HR dashboard to support decision-making using employee data. The goal was to gain hands-on experience in visual analytics by understanding business needs, transforming raw data, creating calculated metrics, and visualizing insights in Tableau.

Although I had some experience working with data, this assignment helped me bridge data analysis and storytelling through dashboards. I also practiced publishing my work and documenting it for my portfolio.

Objectives of the Assignment

1. Understand the business and client needs
 2. Load and transform datasets
 3. Create calculated fields and measures
 4. Build various data visualizations (bar charts, scatter plots, heat maps, etc.)
 5. Design an interactive dashboard for high-level and detailed insights
 6. Publish and share the final dashboard
 7. Document work for a professional portfolio
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Tasks Completed

✓ 1. Load and Transform Data

I loaded the employee dataset into Tableau and reviewed the structure. I created calculated fields such as:

- Age = DATEDIFF('year', [Date of Birth], TODAY())
- Salary Band based on thresholds

This step involved ensuring fields were formatted correctly and usable for visualization.

✓ 2. Create Calculated Measures

I created new calculated fields to analyze employee demographics and income:

- Age
- Salary band
- Gender ratio
- Average salary

These allowed deeper analysis within each section of the dashboard.

✓ 3. Build Visualizations

I created several visualizations including:

- Bar chart: Count of employees by department
- Pie chart: Gender distribution
- Scatter plot: Age vs Salary
- Heat map: Salary by education level
- KPI cards: Total employees, average salary, gender ratio

These visualizations provided both summary and exploratory views.

✓ 4. Design the Dashboard

I divided the dashboard into three clear sections:

1. Overview: Key KPIs, charts
2. Demographics: Gender, age, and education insights
3. Income Analysis: Salary trends and breakdowns

A fourth section featured a detailed employee list with filters by department, gender, education, etc.

Filters and interactivity were added to enhance usability.

✓ 5. Publish the Dashboard

The dashboard was published to Tableau Public to showcase the final output. This makes it easy to include in my portfolio or resume.

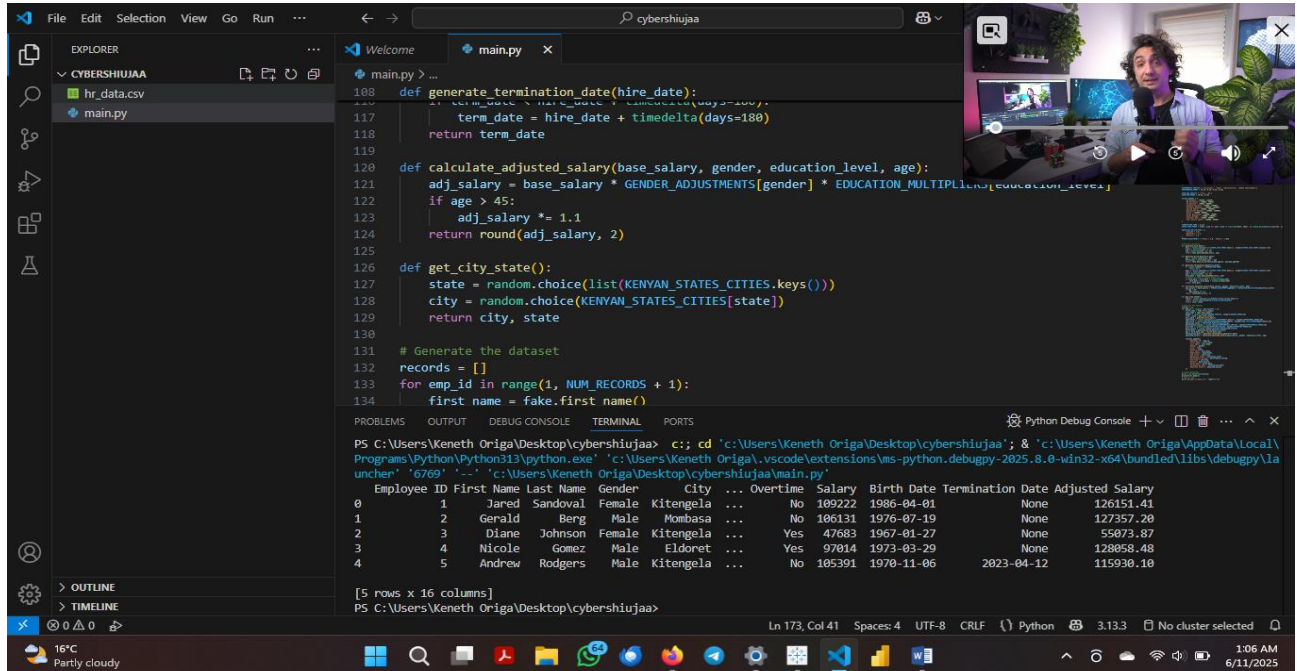
🔗 Link to Dashboard:

https://public.tableau.com/app/profile/keneth.origa2386/viz/HR-DASHBOARD_17496256649050/HRDashboard?publish=yes

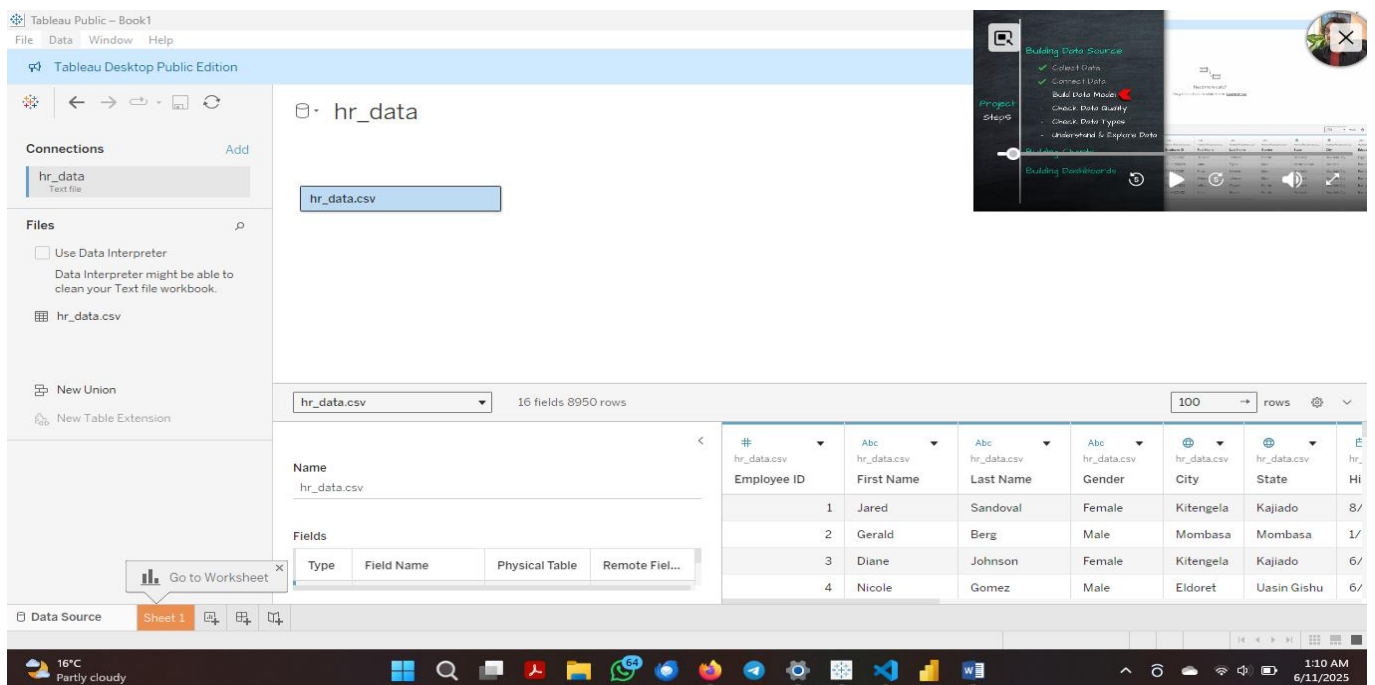
✓ 6. Share and Document Work

Screenshots were captured throughout the process to demonstrate my engagement. All work is documented in this report, and I've saved the .twbx file as a backup.

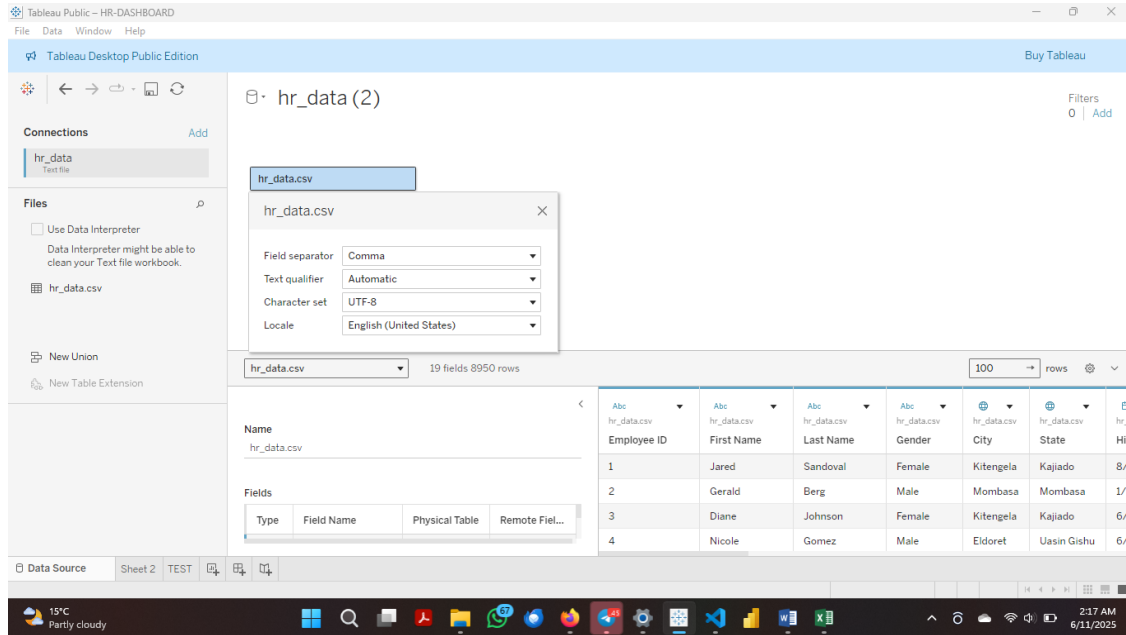
1. Understand the business and client needs



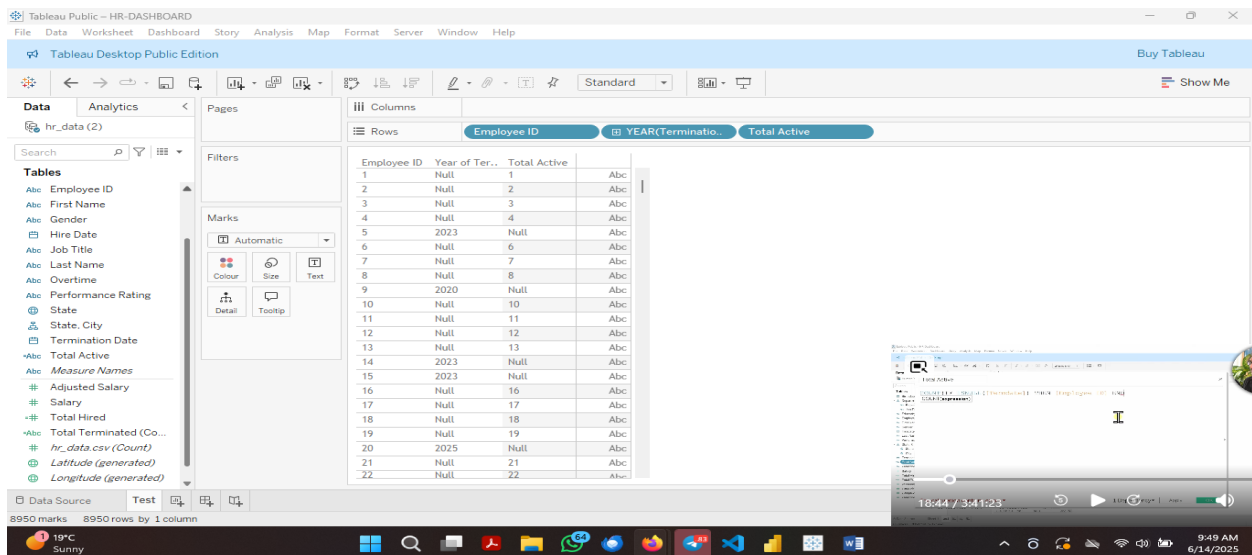
2. Load Data



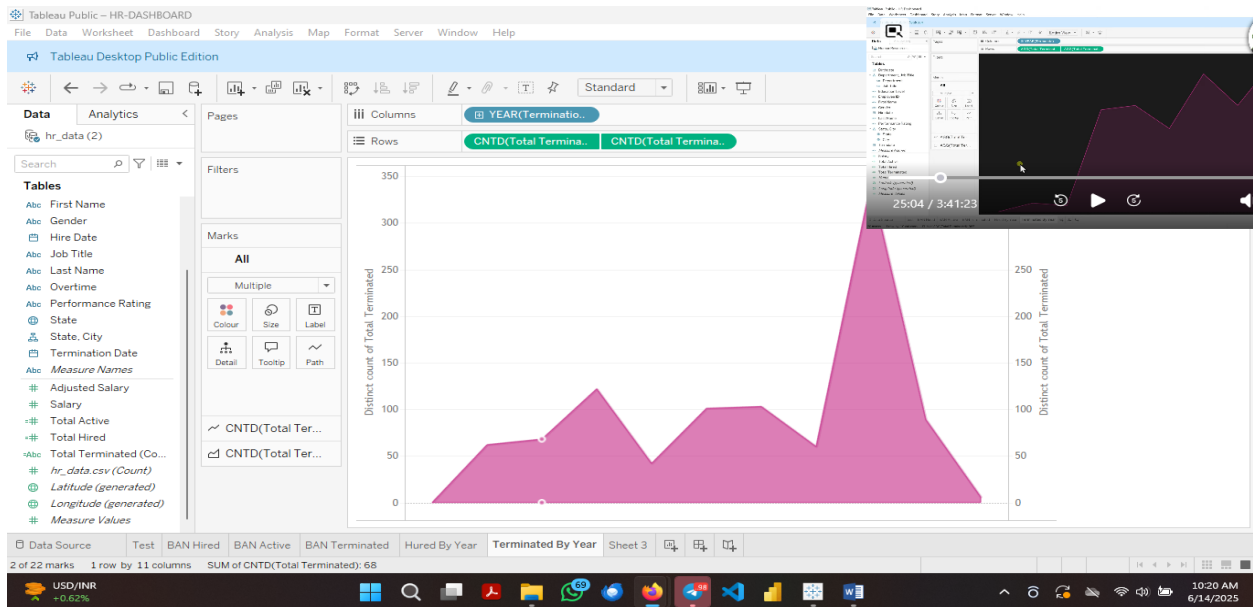
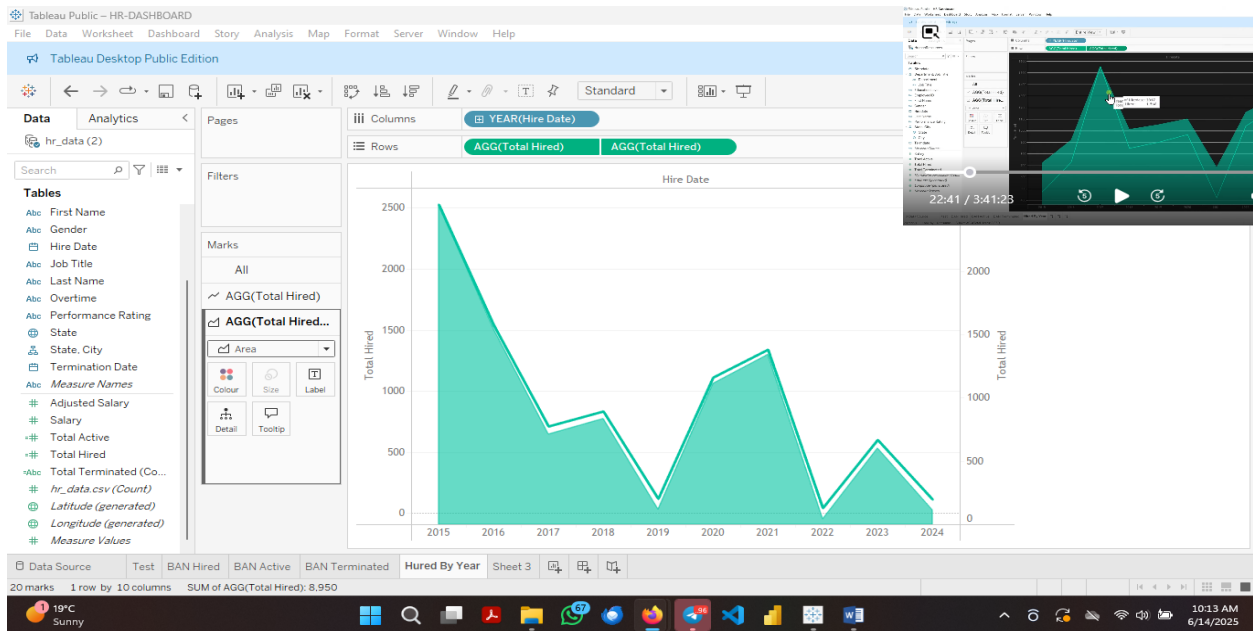
3. Transform Data



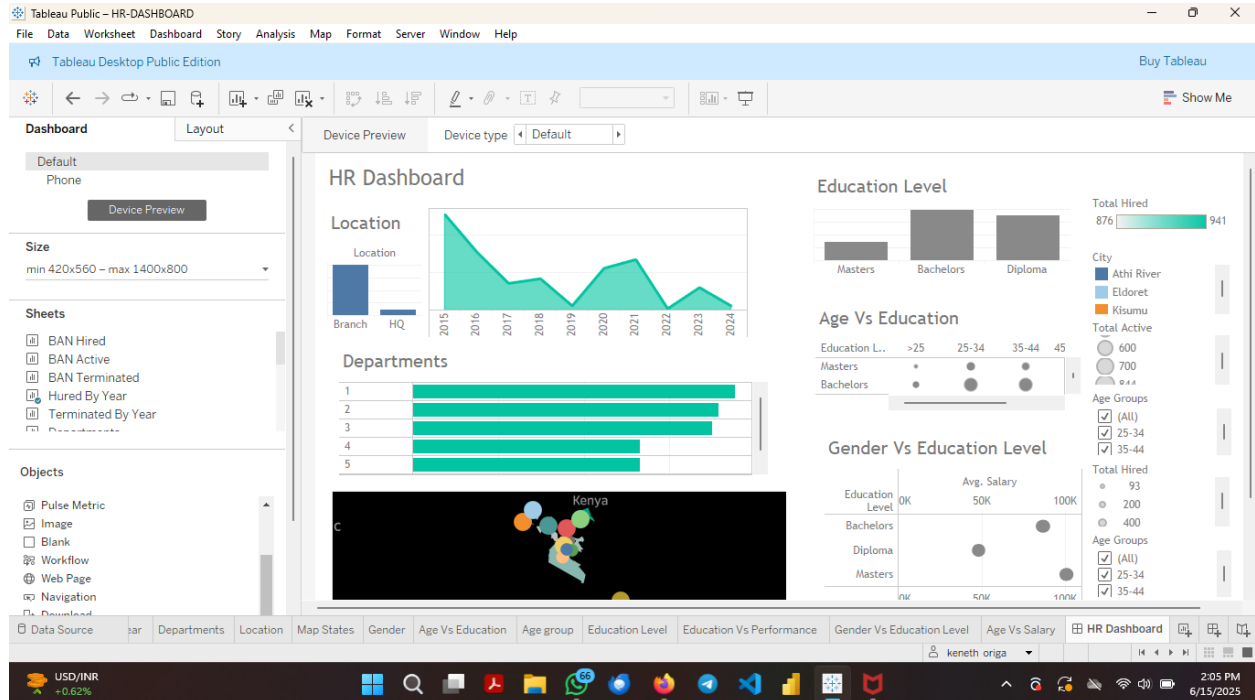
4. Create Calculated Measures



5. Visualize Dashboard



6. Publish your project as part of your portfolio collection



Conclusion

This assignment helped me apply Tableau for real-world analysis and sharpen my data storytelling skills. I've learned how to clean and transform data, create meaningful visuals, and share a professional dashboard. These are valuable skills I will continue building on.

This project will also be featured on my data portfolio as I explore more roles in Data Analytics and Business Intelligence.