



Team 1E

Final Presentation on data visualization
project dashboard

INTRODUCTION

Overview of Presentation

- **Excelerate Data Visualization Project Dashboard:** To display and analyze Excelerate data, we have built a dashboard. It can help us understand learners' behavior, preferences, demographic data, and results. It also helps us to communicate the value of Excelerate and its impact, so that we can improve learner engagement, satisfaction, and retention.

Team Members :

- Sai Kumar Chebolu (Team Lead),
- Ibrahim Muhammad (Project Manager).

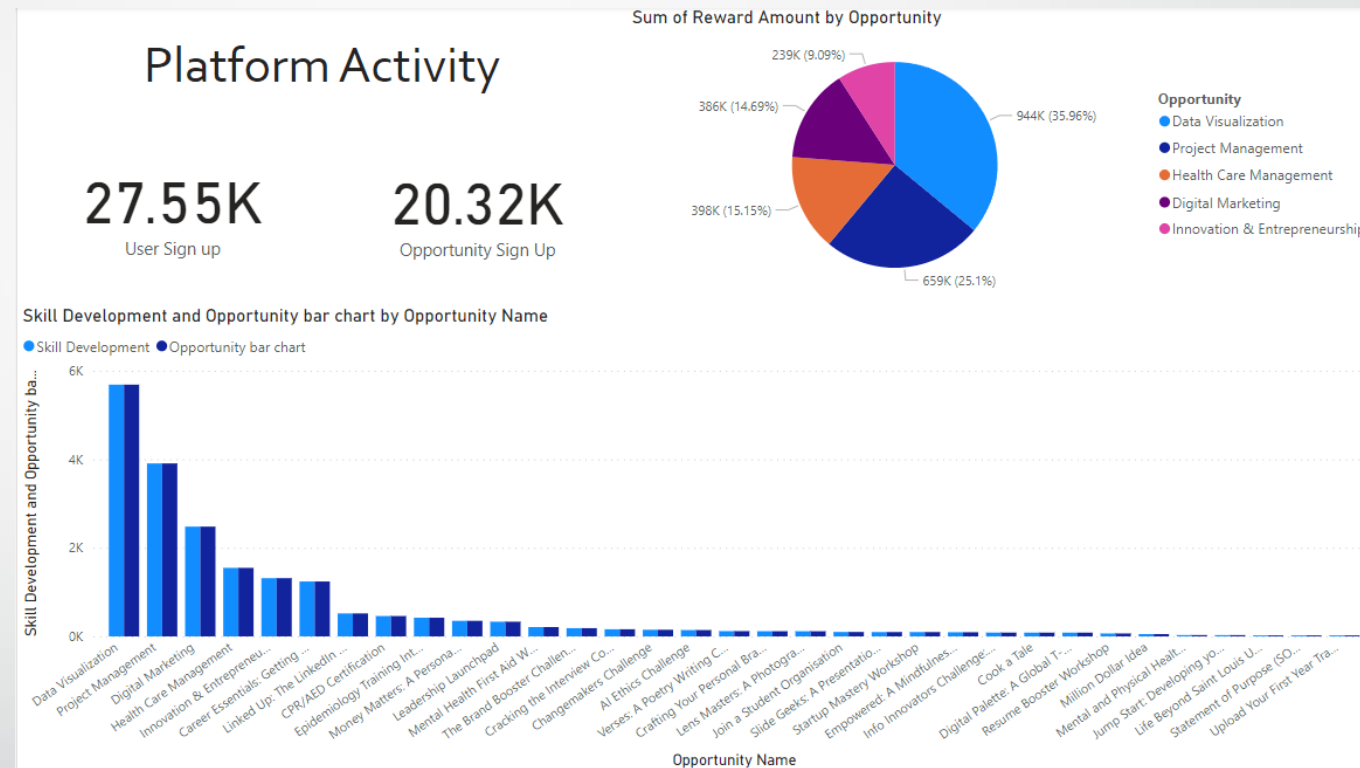
Dashboard Over view

This dashboard visualizes Excelerate data of the students who have signed up an online learning platform opportunities. It's got a total of 10 visualisations that are intended to provide actionable information to the top management. The choice of the right visualizations was subject to careful consideration, including stacked bar charts to compare the metrics between segments,

- Line charts to show trends over time
- Pie charts to display composition,
- Card visualizations to highlight key numbers,
- TreeMaps to display geographical data.

Dashboard Page 1

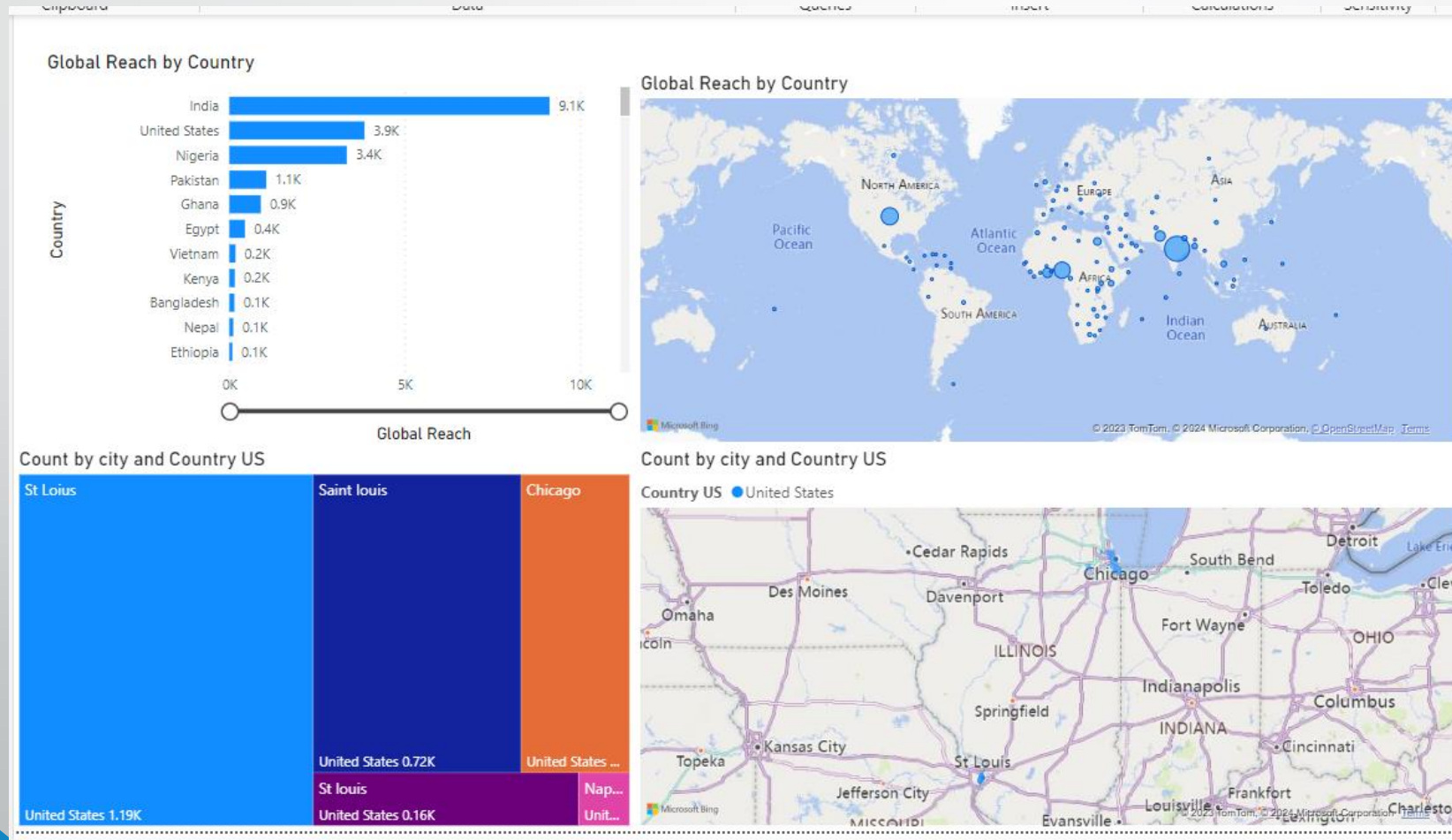
1. Card: To display the total users signed up.
2. Card: To display the total opportunities signed up.
3. Pie Chart: To display the sum of amount earned by each opportunity.
4. Bar Chart: To display the total number of students signed up for different opportunities.



Dashboard Page 2

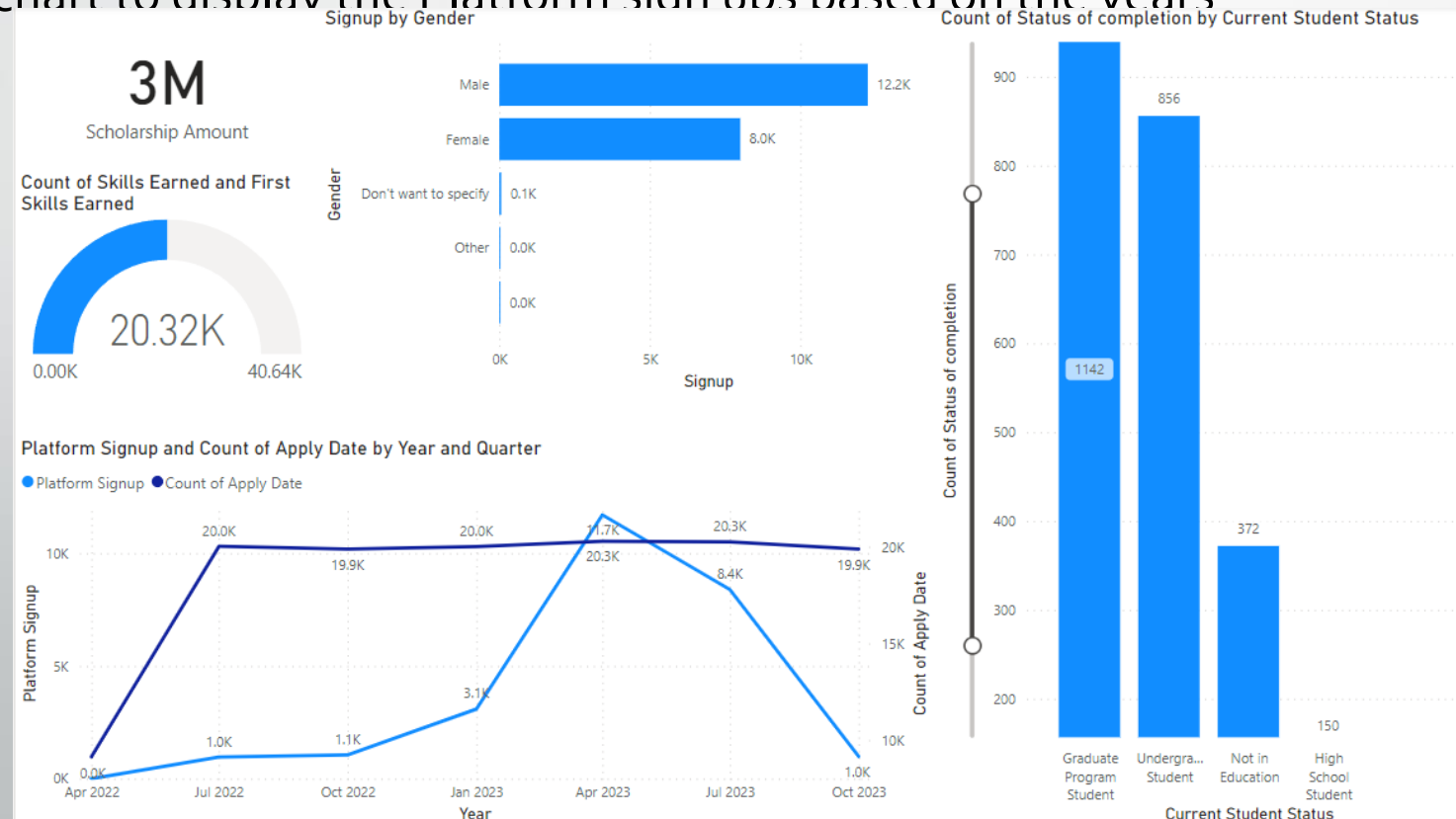
This page shows the Clustered bar chart and Map of top 10 countries learners have signed up

Tree Map and a Filled Map of the cities in the US learners have signed up from



Dashboard Page 3

1. Card: To display the total scholarship amount earned
2. Gauge: To show the total skills earned
3. Clustered bar chart: To show the demographic breakdown of gender of those who have signed up and completed
4. Line and stacked column chart to show the completion of the opportunities by the students
5. Line chart to display the Platform sign ups based on the years



Key Decisions and Design Choices:

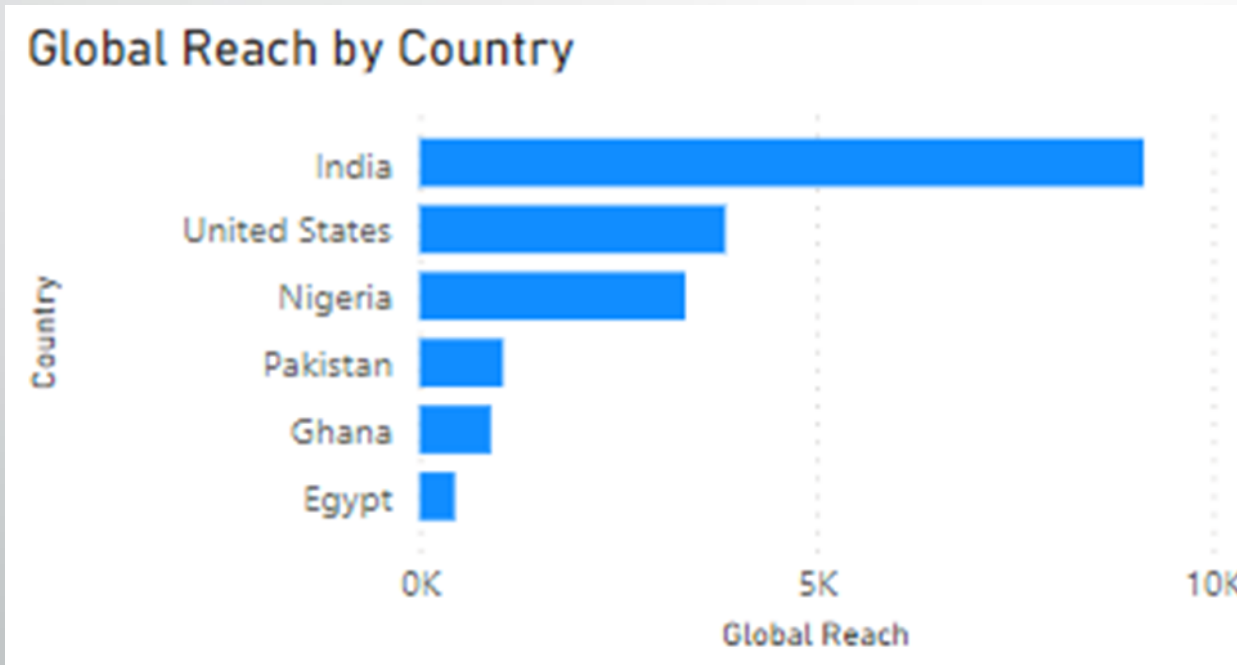
- To create the dashboard wireframe we used Power BI, as it offers a variety of charts, filters, slicers, and tooltips to interact with the data and display it in an appealing way that a person from nontechnical background can also understand
- We've used Excelerate data and Power BI Data Transformation tool to process the data so that we can handle outliers or normalize features, address data quality problems, and create new variables for feature engineering.
- To replace the null values in the gender section and other columns, instead of deleting them, we used the mean and mode functions.
- Based on the type and purpose of the data, we have selected the correct chart types for each component. For example, we've used maps to show how users are distributed by country, a line chart showing the trends in user sign-ups and completions over time, a word cloud that shows the popularity of opportunities based on skill, as well as radar charts for detecting skills development among users

Challenges Faced and Solutions Implemented :

- Initially, it was difficult to overcome the empty strings in user data but we solved this by finding their mean value from a specific location and identifying them as an empty string which enabled us to write code that would replace those empty strings with mean value of the total rows.
- The columns of the State and Country City were filled with many irregularities. In addition, the entries shall be standardized and corrected for errors in spelling or identify and correct locations that are not appropriate.
- Initially, because we're in various time zones, it was difficult for us to set and attend meetings because of our time zones, but with some compromises were able to overcome these difficulties. We overcame this by asking about the availability of the other teammates scheduling the meetings and also recording the meetings to share with the team members who missed the discussions.
- Later on, we had problems with the interactive team members because they couldn't respond to us until a move was made but it was resolved by sharing pending work among active teammates.

Insights Derived

- The most compelling insight derived from our data is the global reach by country. From the bar chart above, India has the most user engagement with the Excelerate platform.
- This insight can influence the decision-making in Excelerate when it comes to preference in hosting an on-site event. Perhaps, it would create a long-lasting impression in the eyes of most users.



Addressing Key Questions

The dashboard aims to answer these key questions:

- How many people have signed up for the platform and how many for the opportunities
- How are the users distributed and what are their characteristics
- What are the most gained skills on Accelerate

Each component of the dashboard answers these questions by providing relevant and interactive visualizations and metrics, such as:

- We have added titles and annotations to guide users on what each visual is trying to communicate.
- The impact of grants and trends in user registrations and completions by the countries, sponsors, and beneficiaries can be seen in some components. Funding, return on investment, and reasons for leaving, using a variety of charts, filters, slicers, and tooltips.
- Displayed the number of signups on their website, and the number of users who have signed up for opportunities, and most of their reward investment is going
- Shown the skills that most users are gaining from the website

User Interaction and Guidance

- The dashboard is designed to be interactive so that you can interact with it. Users to explore data and adjust the view Depending on their needs and preferences.
- Increase Label Size and Clarity: Ensure all labels and annotations are easily readable, using larger fonts and clear language.
- Filters and slicers: The user can use these features Select the criteria of interest, such as a date range, Region, sponsor, category, badge, skill, or reward. The charts will be automatically updated in the dashboard. metrics based on the user's choices.
- Tooltips: More details are given in these features explanations when a user hovers over the data Points on the graph. The tooltips display the following information: For each value, percentage, and label: data point.
- feature

Visual Highlights:

DASHBOARD

Excelerate internship

Platform Activity

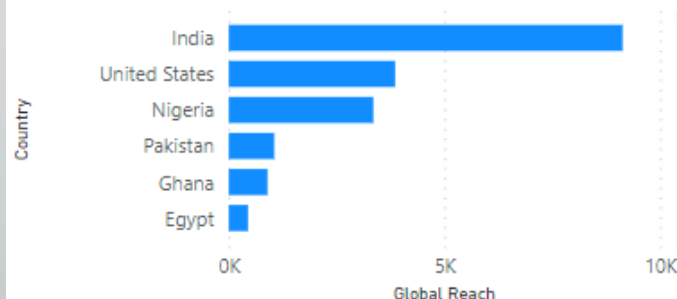
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User Sign up

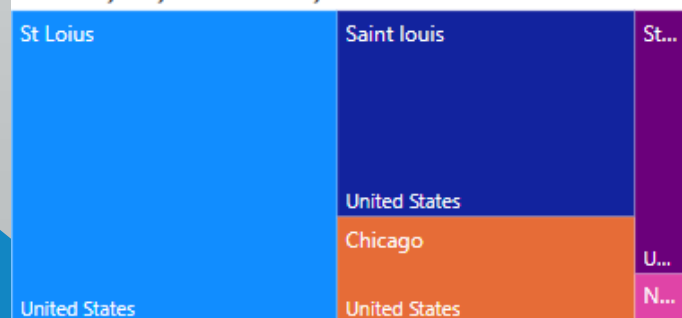
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Opportunity Sign Up

Global Reach by Country



Count by city and Country US



Skill Development and Opportunity bar chart by Opportunity Name

● Skill Development ● Opportunity bar chart



Signup by Gender

3M



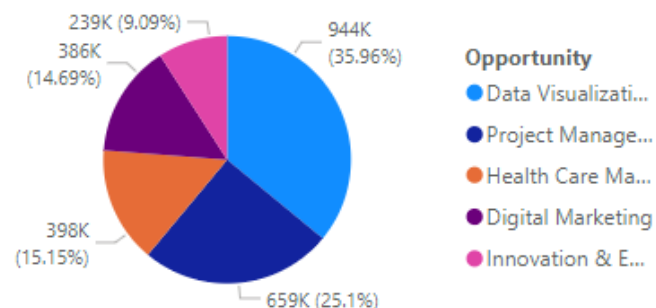
Scholarship Amount

Platform Signup and Count of Apply Date by Year and Quarter

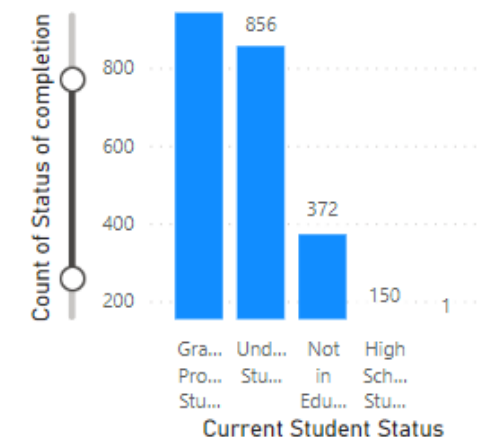
● Platform Signup ● Count of Apply Date



Sum of Reward Amount by Opportunity



Count of Status of completion by Current Student Status



Impact on Decision-Making:

- The effectiveness, efficiency, and overall success of an organization can be significantly influenced by the implementation of a dashboard system.
- It enables decision-makers to have immediate access to critical data, improving their ability to make timely and sound decisions. Dashboard improves visibility, promotes data-driven decision making by presenting clear information, identifies trends, allocates resources, and monitors organizational objectives.
- In general, it can transform the way we make decisions by providing stakeholders with accurate and timely information that contributes to strategy and efficiency.

Conclusion:

By using PowerBI We have made a dashboard to display and analyze Excelerate data, which is an interactive learning platform. It has 10 different visualizations that show various categories of the graphical representation of the given data by using various filters and slicers.