

Solution Guide: Analyze and activate your data with Looker Enterprise

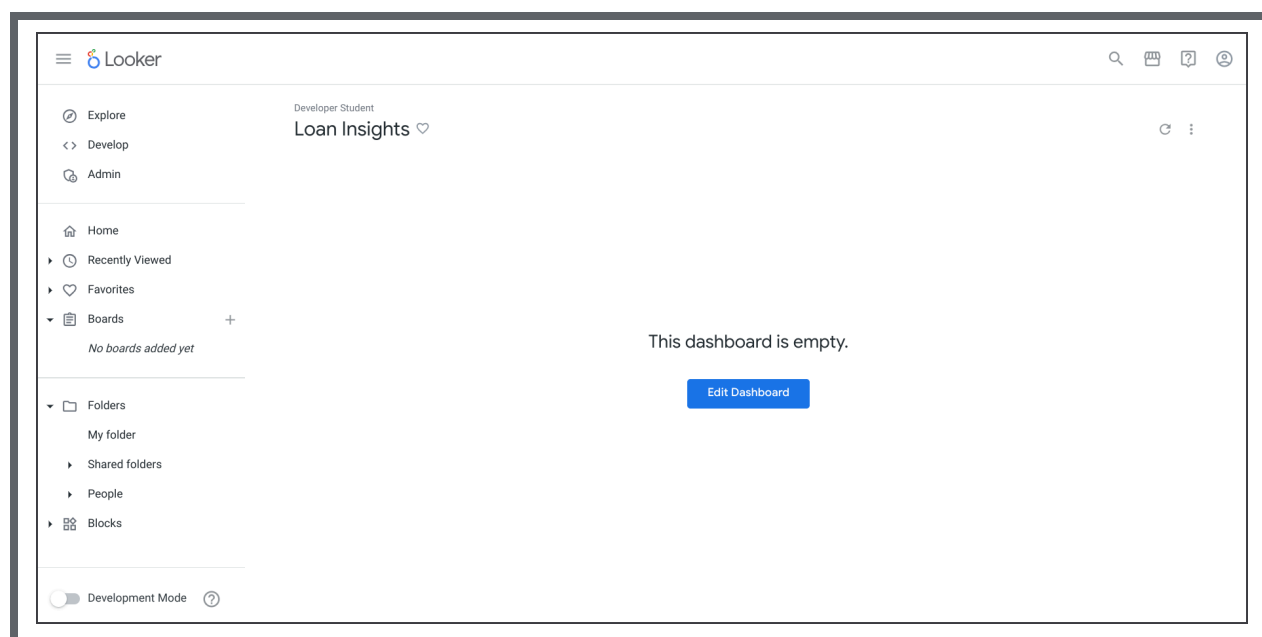
The **Analyze and activate your data with Looker Enterprise lab** is a portion of the capstone project that puts your data visualization skills to the test. The lab includes a set of tasks and challenges that involve visualizing data and building an interactive dashboard within a business scenario. Each task in the lab guides you to apply the skills you learned throughout the course, focusing on analyzing and activating data using Looker Enterprise. The lab also requires you to tackle three challenges to assess your data visualization skills on your own: build interactive charts and customize a dashboard.

This solution guide provides the results of each guided task in the lab for you to assess against your own work. It also includes a step-by-step solution for the three challenges to help you evaluate your approach, as well as identify potential areas for improvement.

Task 1: Get started with Looker

To complete this task, create a dashboard named **Loan Insights**.

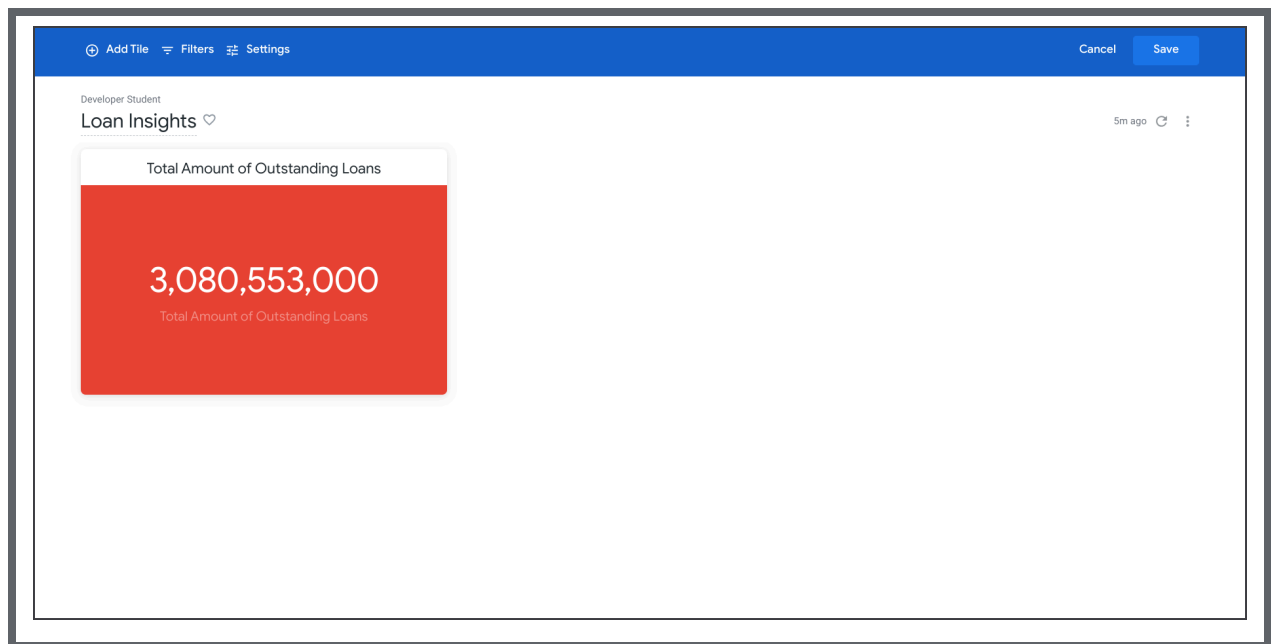
The result is an empty dashboard you'll use to add visualizations throughout this lab.



Task 2: Build a visualization that displays the total amount of all outstanding loans

To complete this task, create a visualization that displays the total outstanding loan balance. The visualization background color should change to red if the value is greater than 3,000,000,000.

The result adds a single value visualization to the dashboard that uses the Outstanding Loan Amount measure to display one metric: the total outstanding balance of all loans.



Task 3 challenge: Build a visualization that displays the percentage of outstanding loans in each status

To complete this challenge, you'll build a visualization that meets the following criteria:

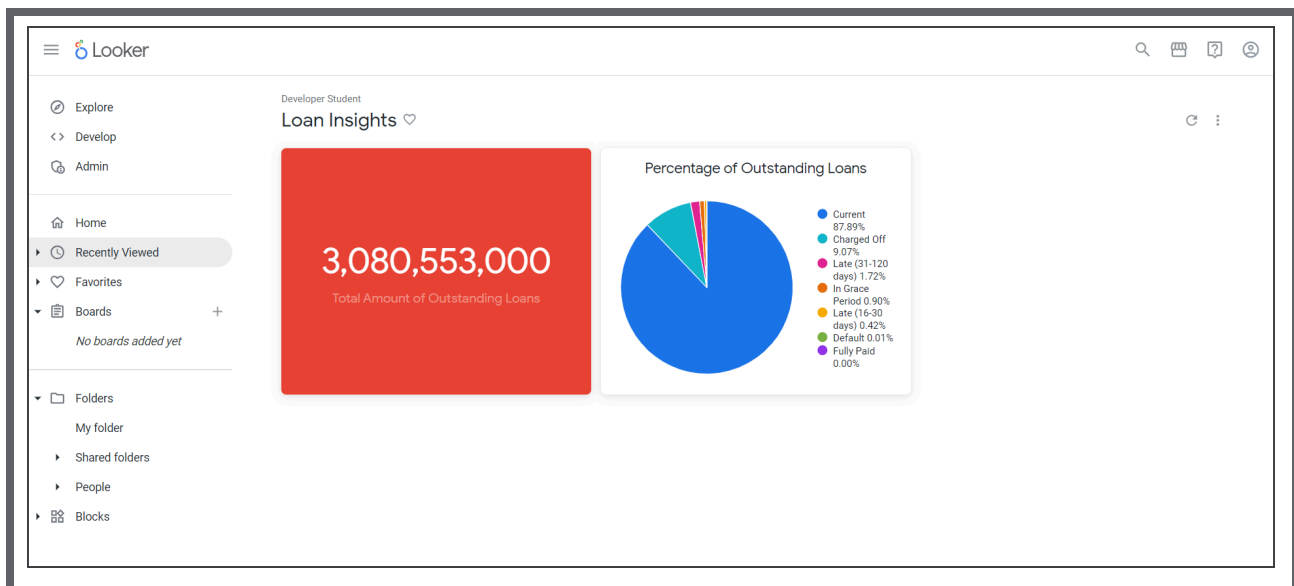
- The visualization must use one dimension and one measure.
- The visualization must be a pie chart, the same visualization type as identified in the multiple choice question for this task.
- The visualization must have the title: Percentage of Outstanding Loans.
- The visualization must be saved to your dashboard.

Solution

1. From the **All Fields** tab, navigate to **Loan > Measures** section, and select **Outstanding Loans Amount**.

2. Navigate to the **All Fields tab > Loan > Dimensions section**, and select **Loan Status**.
3. Expand the **Visualization** bar, and select the **Pie** icon.
4. Click **Run**.
5. Enter the following title for the visualization: **Percentage of Outstanding Loans**.
6. Click **Save** to save the visualization.
7. The dashboard with the new tile displays. Click **Save** to save changes to the dashboard.

The result is a pie chart with the title **Percentage of Outstanding Loans** added to the dashboard.



Task 4 challenge: Build a visualization that displays the total count of outstanding loans for each state

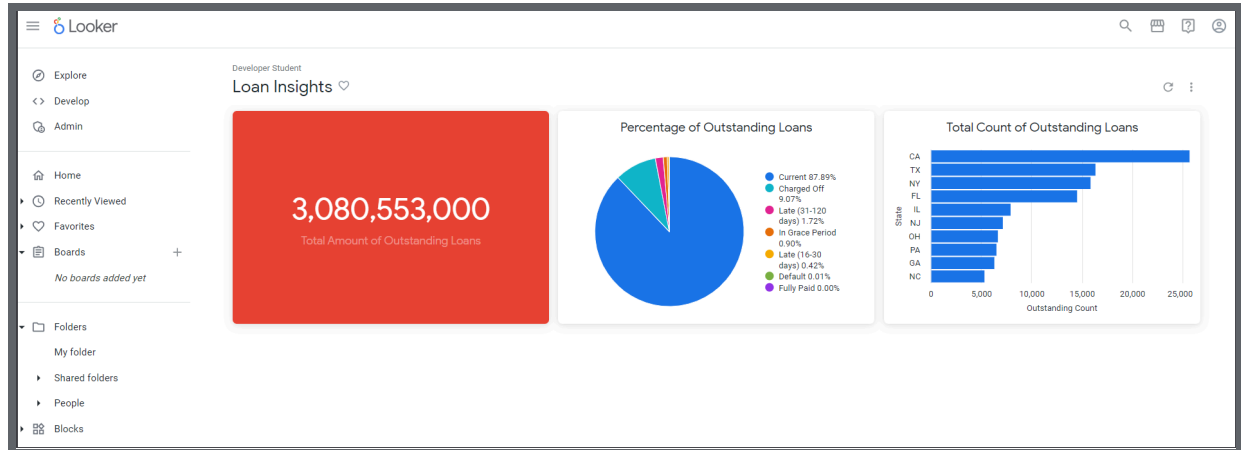
To complete this challenge, you'll build a visualization that meets the following criteria:

- The visualization must use one **dimension** and one **measure**.
- The visualization type must display comparisons between categories in a user-friendly way.
- The visualization must have the title: **Total Count of Outstanding Loans**.
- The results must be limited to the 10 states with the highest **total count of outstanding loans**.
- The visualization must be saved to your dashboard.

Solution

1. Click the **Dashboard actions** menu icon (⋮) and select **Edit dashboard**.
2. Click **Add Tile**, and select **Visualization**.
3. Click **Loan Details** to select the **Loan Details Explore**.
4. In the **All Fields** tab, expand the **Loan** dropdown to explore the Dimensions and Measures.
5. From the **All Fields** tab, navigate to **Loan > Measures** section, and select **Outstanding Count**.
6. Navigate to the **All Fields** tab > **Loan > Dimensions** section, and select **State**.
7. Expand the **Visualization** bar, and select the **Bar** icon.
8. Expand the **Data** section, and update the row limit to **10**.
9. Click **Run**.
10. Enter the following title for the visualization: **Total Count of Outstanding Loans**.
11. Click **Save** to save the visualization.
12. The dashboard with the new tile displays. Click **Save** to save the changes to the dashboard.

The result is a bar chart with the title **Total Count of Outstanding Loans** added to the dashboard.






Task 5 challenge: Build a visualization that displays top 10 customers by highest income

To complete this challenge, you'll build a visualization that meets the following criteria:

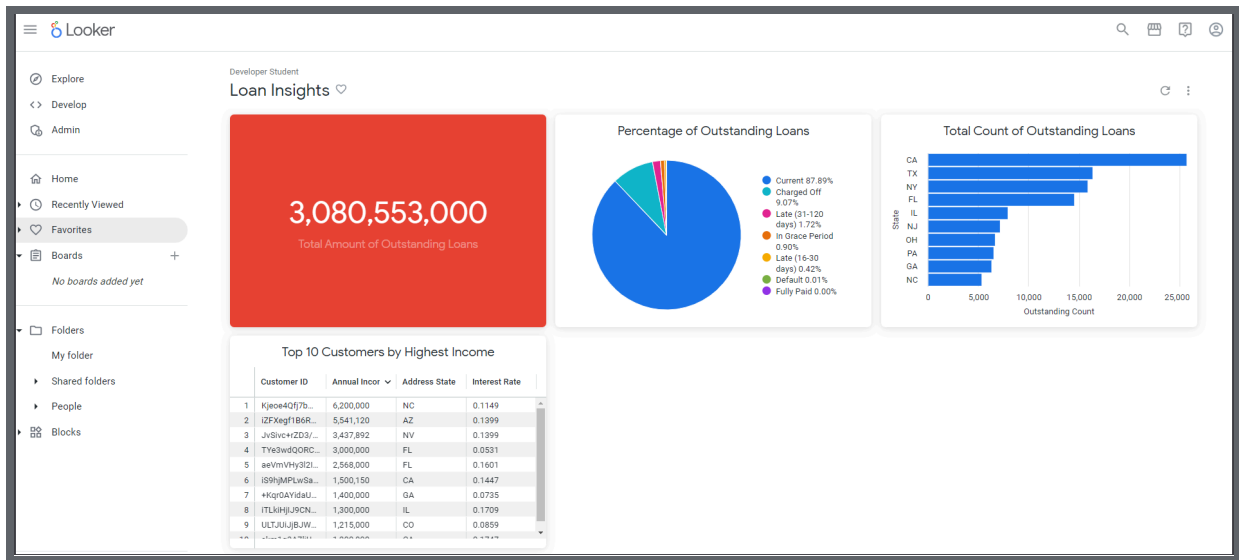
- The visualization must use four **dimensions** and no **measures**.
- The visualization must include **dimensions** from both the **Loan** and **Customer** views.

- The visualization must display customers that own their own homes outright and also have current loans.
- The visualization must only display the data for the top 10 customers with the highest individual income.
- The visualization type must allow the data to be easily sorted.
- The visualization must have the title: **Top 10 Customers by Highest Income**.
- The visualization must be saved to your dashboard.

Solution

1. Click the **Dashboard actions** menu icon () and select **Edit dashboard**.
2. Click **Add Tile**, and select **Visualization**.
3. Click **Loan Details**, to select the **Loan Details Explore**.
4. In the **All Fields** tab, expand the **Loan** dropdown to explore the Dimensions and Measures.
5. Navigate to **All Fields** tab > **Customer** > **Dimensions** section, and select **Customer ID**, **Annual Income**, and **Address State**.
6. Click the **Filter by field** () icon next to **Home Ownership**.
7. Expand the **Filters** bar (if it's not already expanded). For **Customer Home Ownership**, select the **is equal to** option, and select **OWN**.
8. Navigate to the **All Fields** tab > **Loans** > **Dimensions** section, and select **Interest Rate**.
9. Navigate to the **All Fields** tab > **Loan** > **Dimensions** section, click the **Filter by field** () icon next to **Loan Status**.
10. In the **Filters** bar, for **Loan Status**, select the **is equal to** option, and select **Current**.
11. Expand the **Visualization** bar, and select the **Table** icon.
12. Expand the **Data** section, and update the row limit to **10**.
13. Click **Run**.
14. Click the **Customer Annual Income** column to sort the table listing the customers with the highest individual income by descending order.
15. Enter the following title for the visualization: **Top 10 Customers by Highest Income**.
16. Click **Save** to save the visualization.
17. The dashboard with the new tile displays. Click **Save** to save the changes to the dashboard.

The result is a table with the title **Top 10 Customers by Highest Income** added to the dashboard.



Task 6 challenge: Add functionality to the dashboard

To complete this challenge, you'll add functionality to the dashboard enabling automatic refreshes to each visualization according to the following criteria:

- The **Total Amount of Outstanding Loans** must refresh hourly.
- The **Top 10 Customers by Highest Income** and **Percentage of Outstanding Loans** must refresh daily.

Solution

1. Click the **Dashboard actions** menu icon (⋮) and select **Edit dashboard**.
2. Click the **Settings** button in the toolbar.
3. Set a **refresh frequency** for each visualization as follows:
 - The **Total Amount of Outstanding Loans** should refresh hourly.
 - The **Top 10 Customers by Highest Income** and **Percentage of Outstanding Loans** should refresh daily.
4. Click **Save**.
5. In the toolbar, Click **Save** again to save the changes to the dashboard.

As a result of updating the refresh frequency in the settings, each chart will update at the assigned interval, like once an hour or once a day. For any tiles you do not want to refresh automatically, leave the setting as **Does not refresh**.

Settings

General
Filters

☒ Run on load
☐ Automatically refresh dashboard

Tile	Refresh frequency
Top 10 Customers by Highest Income	Refresh every 1 Day
Percentage of Outstanding Loans	Refresh every 1 Day
Total Count of Outstanding Loans	Does not refresh
Total Amount of Outstanding Loans	Refresh every 1 Hour

i Automatic refreshing paused in edit mode
Cancel
Save

Task 7: Optimize dashboard

To complete this task, you must apply your skills to make the dashboard accessible and user-friendly. This task can be completed many ways, depending on the stakeholders' specific user needs and preferences.

Here are some effective ways to optimize your dashboard:

- Choose a color palette that's easy to read, avoids clashing colors, and uses accessible color combinations.
- Arrange the visualizations in an easy-to-use layout that flows and prioritizes important visuals.
- Make sure all your visualizations have a title and appropriate label.
- Make the dashboard one that your users will love and find useful!

Task 8: Share dashboard

To complete this task, you must apply the steps needed to share your dashboard. While the dashboard you built in this exercise cannot be shared beyond the lab environment, this practice will equip you with the essential steps to share and collaborate with others in a future workplace task.

As a reminder, throughout the capstone, you were encouraged to take screenshots of your capstone work to document your progress in each step of the data journey. As you move on to the next course item, these screenshots will be used to demonstrate your work during the capstone in a way that can be added to your portfolio and shared with prospective employers.

Resources for more information

Use these readings to help support you as you work through the solution:

- Guide to Looker Enterprise reading available in course 4 module 4
- Labs and activities in course 4