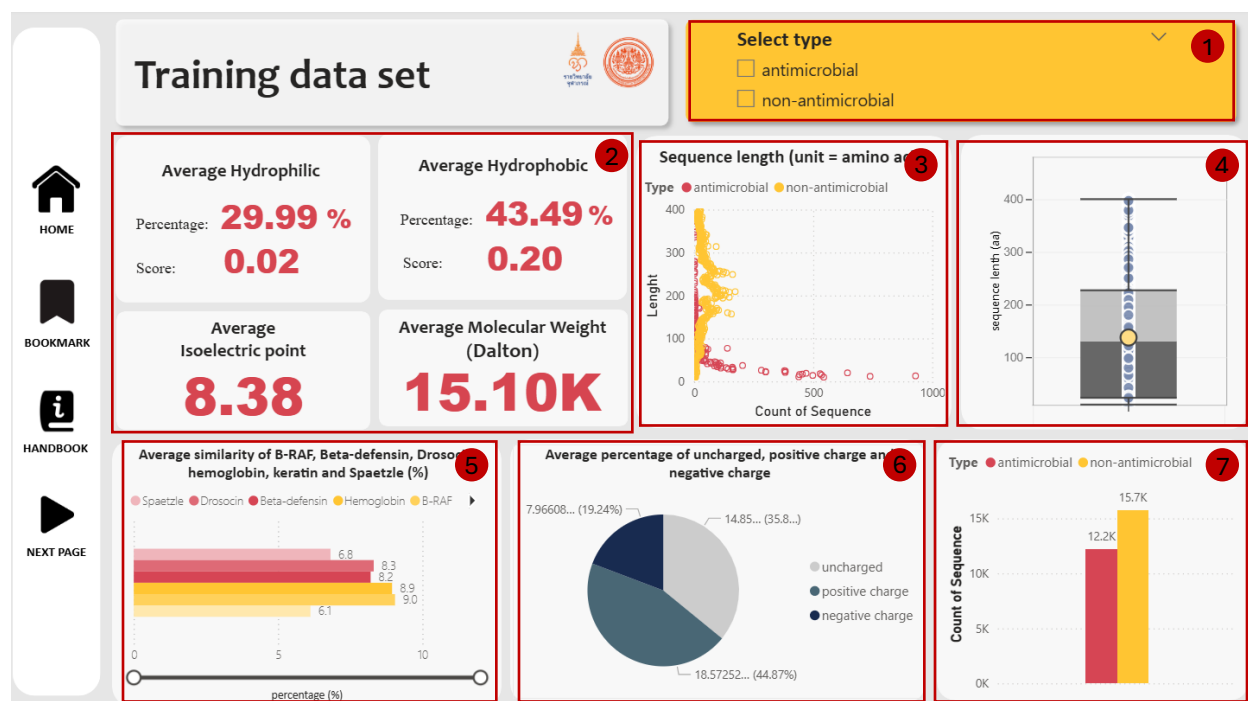


Handbook for dashboard



This main dashboard provides a comprehensive overview of the dataset, offering visual summaries and key statistics for both **antimicrobial** and **non-antimicrobial** types. Users can filter between the two types using the selection panel at the top right (1). The dashboard includes the following components:

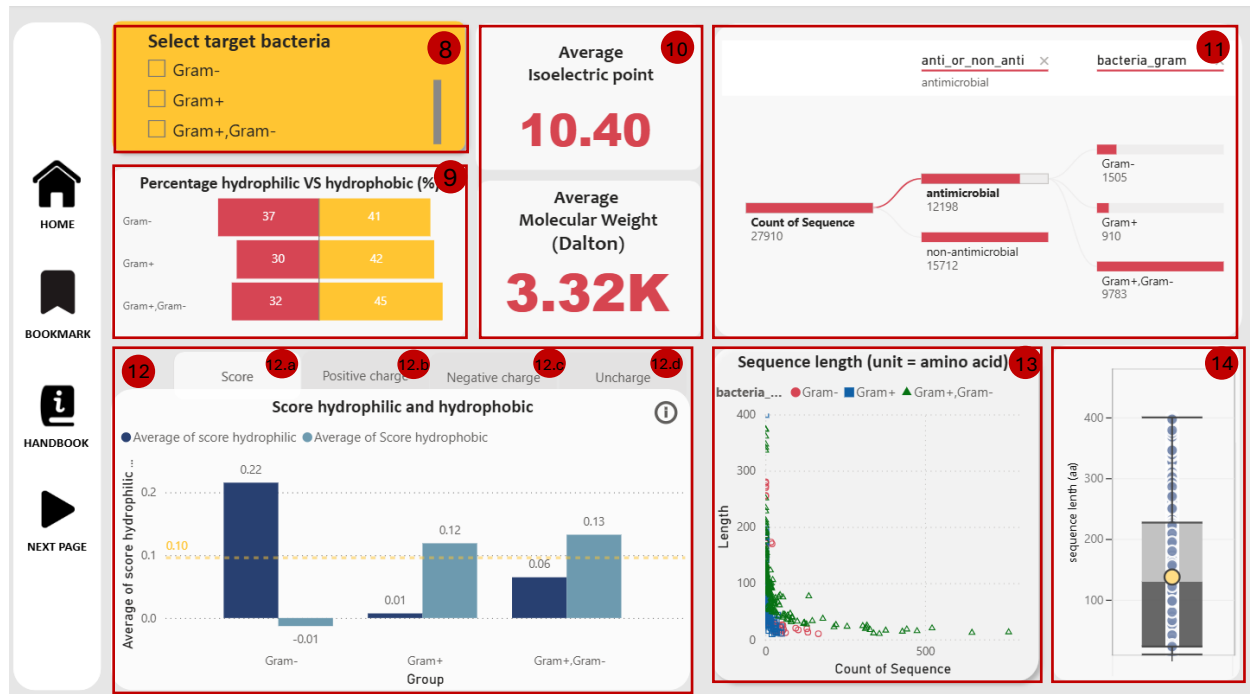
- Filter Panel (1):**
Enables users to select and compare data between antimicrobial and non-antimicrobial types.
- Key Statistics (2):**
Displays overall averages, including:
 - Hydrophilic percentage and score
 - Hydrophobic percentage and score
 - Average isoelectric point
 - Average molecular weight (in Daltons)
- Sequence Length Distribution (3):**
A scatter plot illustrating the distribution of sequence lengths for both types across the dataset.
- Box Plot of Sequence Length (4):**
Highlights the statistical range and distribution of amino acid sequence lengths, including median, quartiles, and outliers.
- Similarity Comparison (5):**
A bar chart comparing average similarity (%) to known proteins such as B-RAF, Beta-defensin, Drosocin, Hemoglobin, Keratin, and Spaetzle.

6. **Charge Composition (6):**

A pie chart showing the average proportion of uncharged, positively charged, and negatively charged amino acids in the sequences.

7. **Sequence Count by Type (7):**

A bar chart summarizing the total number of sequences for each type.



This dashboard presents insights focused on target bacteria types (Gram-, Gram+, and both). Key components include:

8. **Bacteria Type Filter:**

Users can select between Gram-, Gram+, or both groups to filter the data.

9. **Hydrophilic vs. Hydrophobic Percentage:**

A bar chart is used to compare the average percentage of hydrophilic and hydrophobic sequences across each bacteria group.

10. **Key Averages:**

Displays the overall average isoelectric point and molecular weight (in Daltons) for the selected bacteria group.

11. **Sequence Distribution Tree:**

This tree diagram shows the number of sequences categorized by antimicrobial type and bacteria group.

12. **Tabbed Score Comparisons:**

- Average scores of hydrophilic and hydrophobic properties.

- b. Graph showing the relationship between the percentage of positive charge and the number of peptides.
- c. Graph showing the relationship between the percentage of negative charge and the number of peptides.
- d. Graph showing the relationship between the percentage of uncharged residues and the number of peptides.

13. Sequence Length Scatter Plot:

The scatter plot displays sequence lengths by bacteria group, showing spread and density.

14. Sequence Length Box Plot:

Summarizes the distribution (median, quartiles, outliers) of amino acid sequence lengths.