**🎤 Presentation Speech (8 Minutes)**

**1. Introduction (1 minute)**

Good [morning/afternoon], everyone.  
Our project is about **Consumer Review Analysis on Clothing Products**.

We worked with a dataset from Kaggle that contains:

* customer review text,
* ratings,
* clothing categories,
* material and durability details.

Our main goal was to predict customer ratings using **machine learning models**.  
We focused on **Support Vector Machines (SVM)** and **K-Nearest Neighbours (KNN)** to find patterns in reviews and understand customer satisfaction.

**2. Literature Survey (1 minute)**

Online reviews are very important today because customers use them before buying, and companies use them to improve products.

Since reviews are so many, **machine learning** is often used to analyze them.

From past research:

* **SVM** works well with high-dimensional data like text.
* **KNN** is simple and good for finding similarities.

But most studies only use review text. Our project adds **extra product features** like category and durability, which improves accuracy.

**3. Methodology (1.5 minutes)**

The steps we followed were:

1. **Data Preprocessing**
   * Cleaned the text (removed stopwords, symbols).
   * Converted text into numbers using **TF-IDF vectorization**.
   * Encoded categorical product features.
2. **Data Splitting**
   * Divided into training and test sets.
3. **Model Training**
   * Trained **SVM** with different kernels.
   * Trained **KNN** with different neighbor values.
4. **Evaluation**
   * Compared results using accuracy, precision, recall, and F1-score.

**4. Implementation (1 minute)**

We implemented the project in **Python using Jupyter Notebook**.

The libraries used were:

* **Pandas, NumPy** for data,
* **Scikit-learn** for models,
* **Matplotlib/Seaborn** for graphs.

Both models were trained on the same dataset so we could compare them fairly.

**5. Results & Discussion (2 minutes)**

Now, the results.

* **SVM performed better** than KNN.
* The accuracy and F1-score of SVM were higher.
* This is because SVM is stronger with high-dimensional text data.

KNN still worked, but it was less accurate when the dataset grew larger.

**Key insight:** Adding product features along with text helped improve prediction quality.

For businesses, this means they can quickly analyze thousands of reviews and understand what customers like or dislike.

**6. Conclusion (1 minute)**

To conclude:

* We applied **SVM and KNN** to analyze clothing reviews.
* **SVM gave the best results**.
* Using both review text and product details improved accuracy.

In the future, we can try:

* Deep learning methods like LSTM or Transformers,
* Multilingual review analysis,
* Or larger datasets.

This project shows the value of machine learning in **understanding customer opinions** and helping fashion retailers improve products.

**7. Closing (30 seconds)**

We would like to thank our lecturers for guidance and Kaggle for the dataset.

Thank you for your attention. We are happy to answer any questions.