

Model Development Phase Template

Date	1 June 2025
Student Name	Prathmesh Arvind Kumbhar
Project Title	Restaurant Recommendation System
Maximum Marks	10 Marks

Initial Model Training Code, Model Validation and Evaluation Report Initial

Model Training Code (5 marks):

```
from sklearn.feature_extraction.text import CountVectorizer
from sklearn.feature_extraction.text import TfidfVectorizer
df_percent.set_index('name', inplace=True)
indices = pd.Series(df_percent.index)

# Creating tf-idf matrix
tfidf = TfidfVectorizer(analyzer='word', ngram_range=(1, 2), min_df=0, stop_words=None)
tfidf_matrix = tfidf.fit_transform(df_percent['reviews_list'])

cosine_similarities = linear_kernel(tfidf_matrix, tfidf_matrix)
```

Model Validation and Evaluation Report (5 marks):

Model	Summary	Training and Validation Performance Metrics
Model 1	Content-based Recommendation	<p>Training Metrics -None (unsupervised, no explicit training phase)</p> <p>Validation Metrics - None (recommendations are inspected manually)</p>

