

## Model Development Phase Template

Date	Nov 2024
Team ID	Team-739662
Project Title	Chatbot based on Data Science Enquiry using NLP
Maximum Marks	10 Marks

### Initial Model Training Code, Model Validation and Evaluation Report

The initial model training code will be showcased in the future through a screenshot. The model validation and evaluation report will include a summary and training and validation performance metrics for multiple models, presented through respective screenshots.

#### Initial Model Training Code (5 marks):

Paste the screenshot of the model training code

#### Model Validation and Evaluation Report (5 marks):

Model	Summary	Training and Validation Performance Metrics
Model	<p>&gt;&gt;&gt;rasa train</p> <p>The above command is used to train the model.</p> <p>The rasa train command is a powerful tool that automates the training process for both the NLU (Natural Language Understanding) and Core components of a chatbot. It combines the training of these two essential parts of the chatbot pipeline to create a comprehensive and integrated conversational AI system.</p>	<pre> (my.env) D:\major&gt;rasa train D:\major\my.env\lib\site-packages\rasa\core\tracker_store.py:1044: MovedIn20Warning: Deprecated API features detected! These feature(s) are not compatible w ith SQLAlchemy 2.0. To prevent incompatible upgrades prior to updating applications, ensure requirements files are pinned to 'sqlalchemy&lt;2.0'. Set environme nt variable SQLAlchemy_WARN_20=1 to show all deprecation warnings. Set environment variable SQLAlchemy_SILENCE_UBER_WARNING=1 to silence this message. (Bac kground on SQLAlchemy 2.0 at: https://sqlalche.me/e/b8d9)   Base: DeclarativeMeta = declarative_base() D:\major\my.env\lib\site-packages\rasa\shared\utils\validation.py:134: DeprecationWarning: pkg_resources is deprecated as an API. See https://setuptools.py p.io/en/latest/pkg_resources.html   import pkg_resources D:\major\my.env\lib\site-packages\pkg_resources__init__.py:3149: DeprecationWarning: Deprecated call to 'pkg_resources.declare_namespace('mpl_toolkits')'. Implementing implicit namespace packages (as specified in PEP 420) is preferred to 'pkg_resources.declare_namespace'. See https://setuptools.pyypa.io/en/late st/references/keywords.html#keyword-namespace-packages   declare_namespace(pkg) D:\major\my.env\lib\site-packages\pkg_resources__init__.py:3149: DeprecationWarning: Deprecated call to 'pkg_resources.declare_namespace('ruamel')'. Implementing implicit namespace packages (as specified in PEP 420) is preferred to 'pkg_resources.declare_namespace'. See https://setuptools.pyypa.io/en/late st/references/keywords.html#keyword-namespace-packages   declare_namespace(pkg) 2024-12-08 14:13:37 INFO     rasa.cli.train - Started validating domain and training data... D:\major\my.env\lib\site-packages\tensorflow\lite\python\util.py:52: DeprecationWarning: jax.xla_computation is deprecated. Please use the AOT APIs.   from jax import xla_computation as _xla_computation 2024-12-08 14:14:01 INFO     rasa.validator - Validating intents... 2024-12-08 14:14:01 INFO     rasa.validator - Validating uniqueness of intents and stories... 2024-12-08 14:14:01 INFO     rasa.validator - Validating utterances... 2024-12-08 14:14:01 INFO     rasa.validator - Story structure validation... Processed story blocks: 100%   4/4 [00:00&lt;00:00, 550.22it/s, # trackers=1] 2024-12-08 14:14:01 INFO     rasa.core.training.story_conflict - Considering all preceding turns for conflict analysis. 2024-12-08 14:14:01 INFO     rasa.validator - No story structure conflicts found. The configuration for pipeline and policies was chosen automatically. It was written into the config file at 'config.yml'. 2024-12-08 14:14:12 INFO     rasa.engine.training.hooks - Restored component 'CountVectorsFeaturizer' from cache. 2024-12-08 14:14:12 INFO     rasa.engine.training.hooks - Restored component 'CountVectorsFeaturizer' from cache. 2024-12-08 14:14:12 INFO     rasa.engine.training.hooks - Restored component 'DietClassifier' from cache. 2024-12-08 14:14:12 INFO     rasa.engine.training.hooks - Restored component 'EntitySynonymMapper' from cache. 2024-12-08 14:14:12 INFO     rasa.engine.training.hooks - Restored component 'LexicalSyntacticFeaturizer' from cache. 2024-12-08 14:14:12 INFO     rasa.engine.training.hooks - Restored component 'MemoizationPolicy' from cache. 2024-12-08 14:14:12 INFO     rasa.engine.training.hooks - Restored component 'RegexFeaturizer' from cache. 2024-12-08 14:14:12 INFO     rasa.engine.training.hooks - Restored component 'ResponseSelector' from cache. 2024-12-08 14:14:12 INFO     rasa.engine.training.hooks - Restored component 'RulePolicy' from cache. 2024-12-08 14:14:12 INFO     rasa.engine.training.hooks - Restored component 'TEDPolicy' from cache. 2024-12-08 14:14:12 INFO     rasa.engine.training.hooks - Restored component 'UnexpecTEDIntentPolicy' from cache. Your Rasa model is trained and saved at 'models\20241208-101409-aquamarine-paste.tar.gz'. </pre>