Work Plan

Phase 1: Data Exploration and Preprocessing

- **Task:** Explore and prepare the dataset
- **People Involved:** Everyone
- **Time:** Apr 1 – Apr 6
- **Description:** Explore the provided dataset and identify any limitations or issues. If necessary, explore additional datasets and merge them after preprocessing, or create a new dataset.

Phase 2: Intent Classification Model Exploration

- **Task:** Research and select algorithms/models for intent classification
- **People Involved:** Venkata Satya Sri Ram Giduthuri, Kamal Preetam Chittuluri, Pranathi Nallala
- **Time:** Apr 1 – Apr 6
- **Description:** Research and evaluate different deep neural networks and machine learning algorithms for intent classification. Select the most promising algorithms/models for further development.

Phase 3: Intent Classification Model Development

- **Task:** Develop and train intent classification models
- **People Involved:** Venkata Satya Sri Ram Giduthuri, Kamal Preetam Chittuluri, Pranathi Nallala
- **Time:** Apr 7 – Apr 10
- **Description:** Develop and train intent classification models using the selected algorithms/models. Tune the models to optimize their performance.

Phase 4: Model Evaluation and Selection

- **Task:** Evaluate and select the best performing model
- **People Involved:** Everyone
- **Time:** Apr 10
- **Description:** Evaluate the performance of the different models using appropriate metrics. Select the model with the highest accuracy and lowest error rate.

Phase 5: Spell Checking Mechanism

- **Task:** Integrate a spell-checking mechanism
- **People Involved:** Kavya, Komal
- **Time:** Apr 7 – Apr 10
- **Description:** Explore and evaluate different methods for contextual spell checking. Select and integrate the most effective method into the chatbot.

Phase 6: Response Generation

- **Task:** Create and customize response templates
- **People Involved:** Everyone

- **Time:** Apr 7 – Apr 13
- **Description:** Create and customize response templates for each intent. Use a rule-based approach with regular expression statements to generate appropriate responses.

Phase 7: Integration and Chatbot Interface
- **Task:** Integrate components and create a chatbot interface
- **People Involved:** Everyone
- **Time:** Apr 16 – Apr 17
- **Description:** Integrate the intent classification model, spell checking mechanism, and response generation component into a single chatbot system. Design and develop a simple and user-friendly chatbot interface.

Phase 8: End-to-End Testing
- **Task:** Test the chatbot's functionality
- **People Involved:** Everyone
- **Time:** Apr 18
- **Description:** Thoroughly test the chatbot's functionality to ensure that it can accurately classify intents, correct spelling errors, and generate appropriate responses.

Phase 9: Buffer Period
- **Task:** Allow for unforeseen issues and improvements
- **People Involved:** Everyone
- **Time:** Apr 19 – Apr 20
- **Description:** Allow for additional time to address any unforeseen issues or make improvements to the chatbot before the submission deadline. If every planned feature is implemented, we'll try to include any additional features as we see fit to improve the project.

Phase 10: Documentation
- **Task:** Document the project
- **People Involved:** Everyone
- **Time:** Apr 20 – Apr 22
- **Description:** Document the entire project, including the dataset, models used, implementation details, and testing results.

Phase 11: User-Friendly Chatbot UI
- **Task:** Design and develop a user-friendly chatbot UI
- **People Involved:** Kamal Preetam Chittuluri
- **Time:** Apr 20 – Apr 22
- **Description:** Design and develop a simple and user-friendly UI for the chatbot.

Note:

- The work plan is subject to change based on progress and unforeseen circumstances.
- All team members are expected to contribute to each phase as needed.
- Regular communication and updates will be essential for successful project execution.