Project Design Phase-II
Data Flow Diagram

Date: 19 October 2023
Team ID: Team-592965
Project Name: Ship Classification Using Deep Learning
Maximum Marks: 4 Marks

Data Flow:

Data Collection: This process involves collecting ship images from various sources, which can include web scraping, data purchase, or other methods. The collected data is then stored in a raw data repository.

Data Preprocessing: The raw ship image data is preprocessed to prepare it for model training. This preprocessing may include resizing images, normalizing pixel values, and augmenting the data to increase diversity.

Model Training: In this process, the preprocessed data is used to train the machine learning model. The trained model is then saved for later use.

Model Evaluation: The trained model is evaluated using a separate set of data to assess its accuracy and performance.

Model Deployment: This process involves deploying the trained model to make it available for real-world ship classification applications.

User Interaction: Users interact with the deployed model through an application or API to submit ship images for classification.

Flow in the model:

Data flows from the Data Repository to the Data Preprocessing process, where it is transformed into preprocessed data .

The preprocessed data flows to the Model Training process, where the model is trained using this data.

The trained model can be used for classification. Separate evaluation data is used in the Model Evaluation process, and the results are used for assessing the model's accuracy.

Once the model is ready, it can be deployed from the Trained Model Repository, making it accessible to users.

Users interact with the deployed model through the User Interaction process, submitting ship images for classification.

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