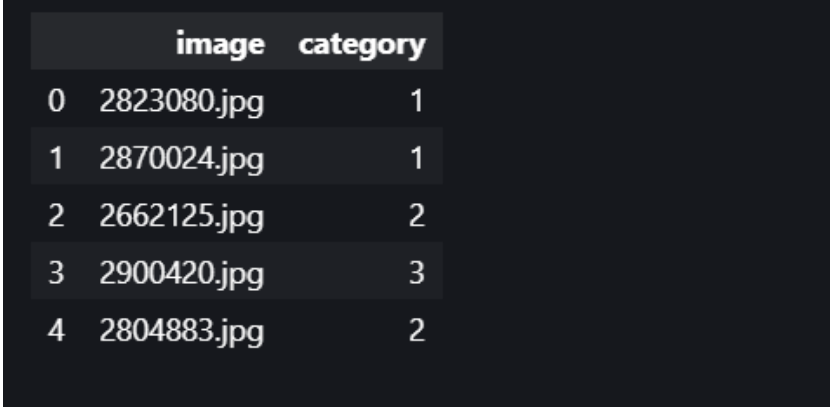


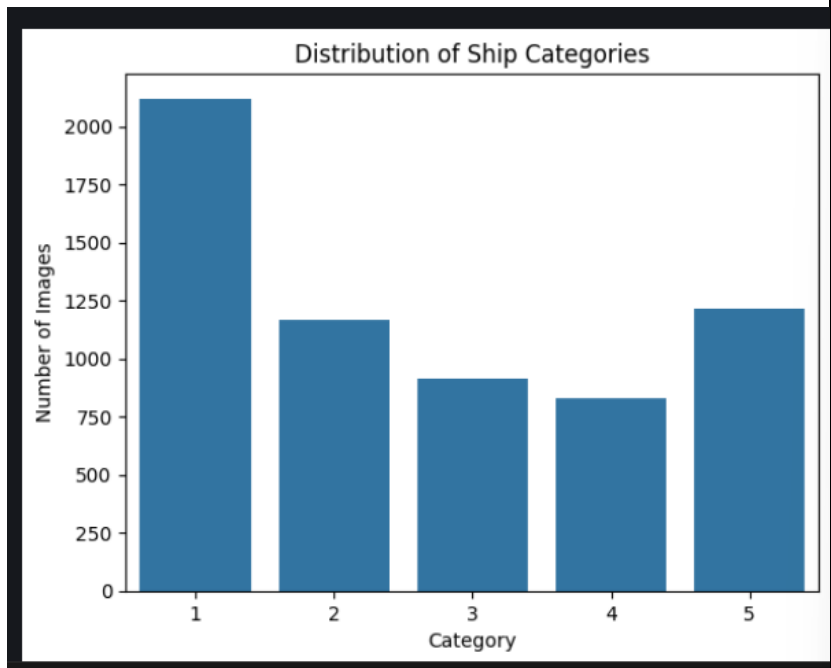
## Data Collection and Preprocessing Phase

Date	15 March 2024
Team ID	SWTID1749974387
Project Title	<b>Neural Networks Ahoy: Cutting-Edge Ship Classification For Maritime Mastery</b>
Maximum Marks	6 Marks

## Data Exploration and Preprocessing Report

Dataset variables will be statistically analyzed to identify patterns and outliers, with Python employed for preprocessing tasks like normalization and feature engineering. Data cleaning will address missing values and outliers, ensuring quality for subsequent analysis and modeling, and forming a strong foundation for insights and predictions.

Section	Description
Data Overview	 <pre> image  category 0  2823080.jpg      1 1  2870024.jpg      1 2  2662125.jpg      2 3  2900420.jpg      3 4  2804883.jpg      2 </pre>
Analysis	



Bivariate Analysis

NA

Multivariate Analysis	NA																		
Outliers and Anomalies	-																		
Data Preprocessing Code Screenshots																			
Loading Data	<div><pre>import pandas as pd  df = pd.read_csv(CSV_PATH) df.columns = ['image', 'category'] #df = df.sample(n=1000, random_state=42).reset_index(drop=True) df.head()</pre></div> <table><thead><tr><th></th><th>image</th><th>category</th></tr></thead><tbody><tr><td>0</td><td>2823080.jpg</td><td>1</td></tr><tr><td>1</td><td>2870024.jpg</td><td>1</td></tr><tr><td>2</td><td>2662125.jpg</td><td>2</td></tr><tr><td>3</td><td>2900420.jpg</td><td>3</td></tr><tr><td>4</td><td>2804883.jpg</td><td>2</td></tr></tbody></table>		image	category	0	2823080.jpg	1	1	2870024.jpg	1	2	2662125.jpg	2	3	2900420.jpg	3	4	2804883.jpg	2
	image	category																	
0	2823080.jpg	1																	
1	2870024.jpg	1																	
2	2662125.jpg	2																	
3	2900420.jpg	3																	
4	2804883.jpg	2																	
Handling Missing Data	NA																		

Category Mapping	<pre>category_map = {     1: 'Cargo',     2: 'Military',     3: 'Carrier',     4: 'Cruise',     5: 'Tanker' }  df['class_name'] = df['category'].map(category_map)</pre> <span>Python</span>
Feature Engineering	Attached the codes in final submission.
Save Processed Data	-