

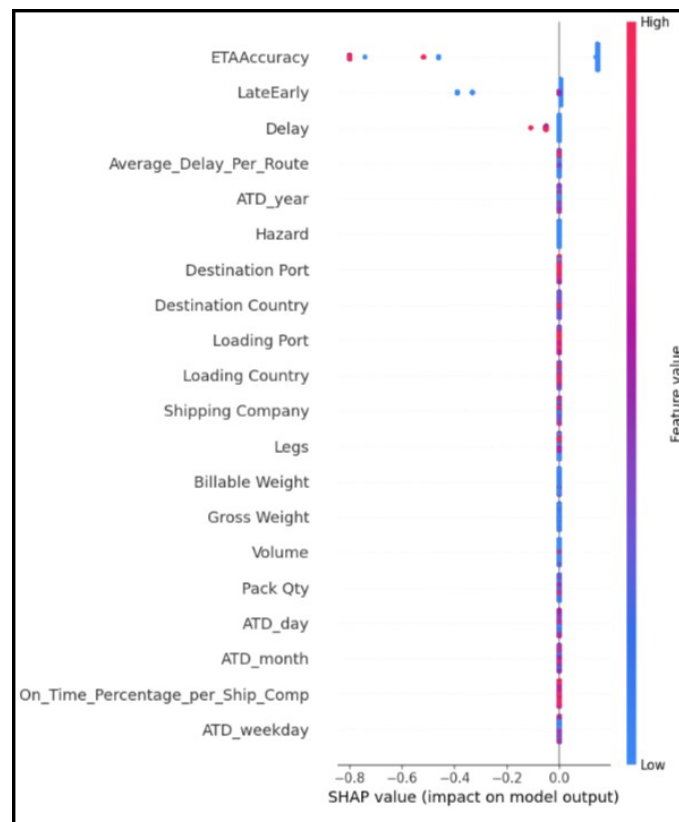


LogiPredict: Smart Shipping Solutions

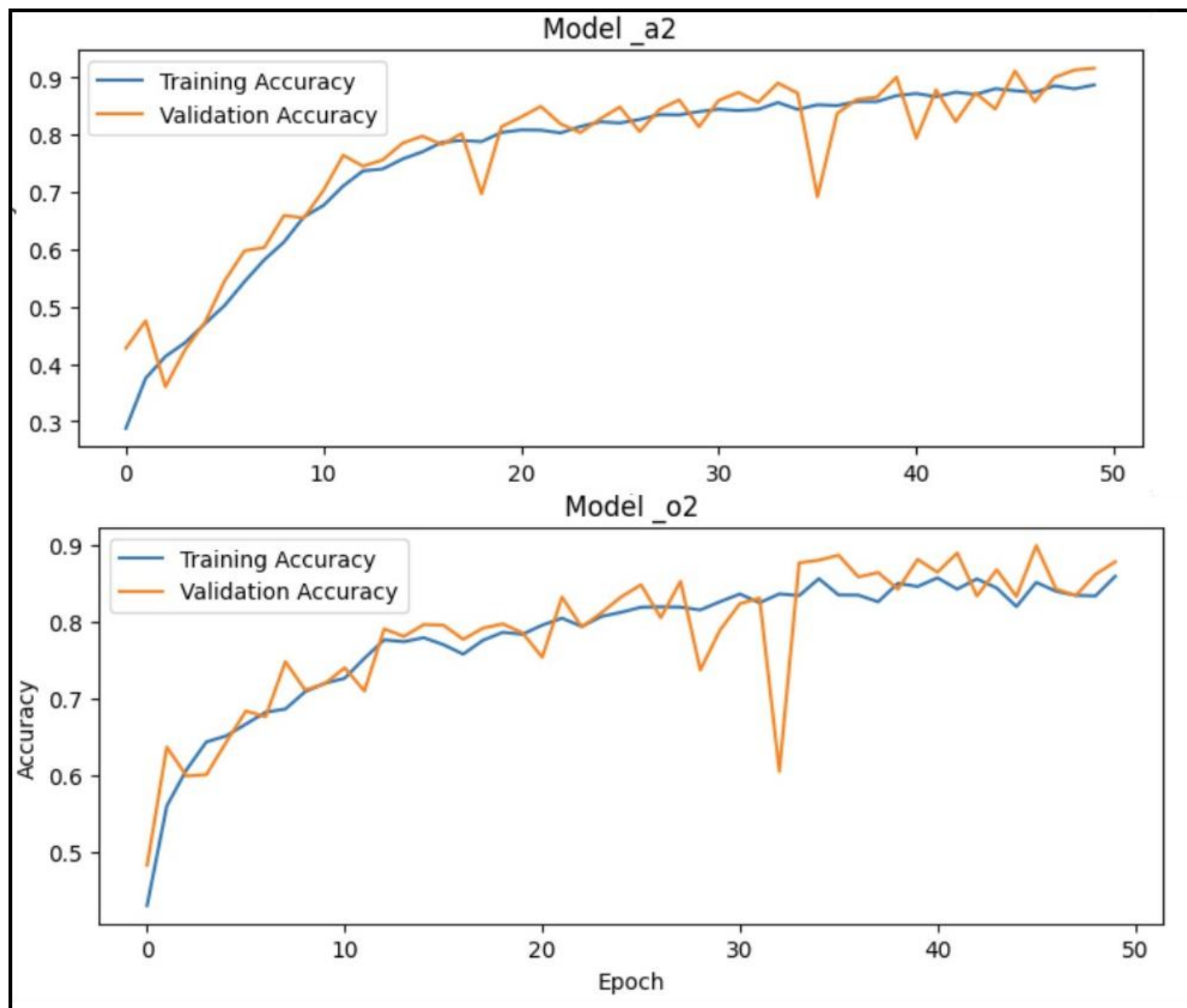
Project Overview: The aim of this project was to create a prediction model and app for a shipping company. The dataset comprised approximately 72,000 rows of cleaned and preprocessed data, including feature engineering.

Data Segmentation: Upon analysis, it was observed that about 60% of the data pertained to air travels, while the remaining 40% were ocean travels. A decision was made to segregate the data into two distinct dataframes: one for air travels and one for ocean travels. This segmentation was based on specific attributes unique to each mode of transportation.

Feature Importance Analysis: To identify influential features, the SHAP (SHapley Additive exPlanations) method was employed. SHAP provides insights into the impact of each feature on model predictions, aiding in feature selection and interpretation.



Model Evaluation: During model training and validation, it was observed that models trained on the original data without extensive feature engineering exhibited superior accuracy compared to those with engineered features. This phenomenon can be attributed to factors such as data quality, overfitting, simplicity versus complexity, and domain-specific insights.



Excel File Samples: Sample Excel files were generated to showcase predicted shipping companies for specific routes, loading ports, loading countries, destination ports, and destination countries. Both the original shipping company and the predicted one were included in the files, highlighting cases of matching and differing results.

A	B	C	D	E	F	G	H	AB	AC
	Hazard	Destination Port	Destination Country	Loading Port	Loading Country	Shipping Company	Legs	Predicted	Predicted Confidence
1981	0	London-Heathrow	UNITED KINGDOM	Tel-Aviv	ISRAEL	Virgin Atlantic Cargo	1	FINNAIR	87.97
32488	0	Tel-Aviv	ISRAEL	FRANKFURT	GERMANY	Turkish Airlines	0	EL-AL Israel Airlines	87.97
27686	0	Tel-Aviv	ISRAEL	ZURICH	SWITZERLAND	CHALLENGE GROUP	0	EL-AL Israel Airlines	87.97
29877	0	Tel-Aviv	ISRAEL	BARCELONA	SPAIN	Turkish Airlines	0	EL-AL Israel Airlines	87.97
15111	0	Tel-Aviv	ISRAEL	JOHN F.KENNEDY	USA	British Airways	0	EL-AL Israel Airlines	87.97
10573	1	BANGKOK	THAILAND	Tel-Aviv	ISRAEL	Cathay Pacific Airways	2	FINNAIR	87.97
2266	0	Newark, NJ	USA	Tel-Aviv	ISRAEL	EL-AL Israel Airlines	1	FINNAIR	87.97
1174	0	Athens	GREECE	Tel-Aviv	ISRAEL	Turkish Airlines	2	FINNAIR	87.97
13562	1	Madrid	SPAIN	Tel-Aviv	ISRAEL	Iberia	1	FINNAIR	87.97
21561	0	Tel-Aviv	ISRAEL	CHENNAI	INDIA	Turkish Airlines	0	EL-AL Israel Airlines	87.97
8084	1	Dallas,tx	USA	Tel-Aviv	ISRAEL	EL-AL Israel Airlines	3	FINNAIR	87.97
34527	0	Tel-Aviv	ISRAEL	LOS ANGELES	USA	EL-AL Israel Airlines	0	EL-AL Israel Airlines	87.97
27199	0	Tel-Aviv	ISRAEL	HONG-KONG	HONG KONG	Silkway Airlines	0	EL-AL Israel Airlines	87.97
39433	0	Tel-Aviv	ISRAEL	CHICAGO	USA	Silkway Airlines	0	EL-AL Israel Airlines	87.97
9617	1	Johannesburg	SOUTH AFRICA	Tel-Aviv	ISRAEL	Swiss International Air L	2	FINNAIR	87.97
15638	0	Tel-Aviv	ISRAEL	DALLAS	USA	American AirLines	0	EL-AL Israel Airlines	87.97
10602	1	Maastricht	NETHERLANDS	Tel-Aviv	ISRAEL	Aztec airways	3	FINNAIR	87.97
31554	0	Tel-Aviv	ISRAEL	LONDON	UNITED KINGDOM	CHALLENGE GROUP	0	EL-AL Israel Airlines	87.97
34388	0	Tel-Aviv	ISRAEL	JOHN F.KENNEDY	USA	United Airlines	0	EL-AL Israel Airlines	87.97
21885	0	Tel-Aviv	ISRAEL	HONG-KONG	HONG KONG	EL-AL Israel Airlines	0	EL-AL Israel Airlines	87.97
28660	0	Tel-Aviv	ISRAEL	CHICAGO	USA	United Airlines	0	EL-AL Israel Airlines	87.97
26185	0	Tel-Aviv	ISRAEL	WARSAW	POLAND	Swiss International Air L	0	EL-AL Israel Airlines	87.97
26549	0	Tel-Aviv	ISRAEL	LONDON	UNITED KINGDOM	Turkish Airlines	0	EL-AL Israel Airlines	87.97
6400	0	NEW YORK, NY	USA	Tel-Aviv	ISRAEL	Lufthansa Cargo AG	3	FINNAIR	87.97
31400	0	Tel-Aviv	ISRAEL	AMSTERDAM	NETHERLANDS	EL-AL Israel Airlines	0	EL-AL Israel Airlines	87.97
29211	0	Tel-Aviv	ISRAEL	SEATTLE	USA	Lufthansa Cargo AG	0	EL-AL Israel Airlines	87.97
34313	0	Tel-Aviv	ISRAEL	FRANKFURT	GERMANY	Turkish Airlines	0	EL-AL Israel Airlines	87.97
30690	0	Tel-Aviv	ISRAEL	FRANKFURT	GERMANY	Turkish Airlines	0	EL-AL Israel Airlines	87.97

Next Steps: A meeting with Business Intelligence (BI) counterparts is planned to gather feedback and insights for further refinement of the model. This collaborative effort aims to enhance the model's performance and accuracy through iterative fine-tuning.