**Conversion Rate** 

23%

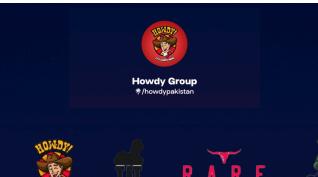
**Foot Traffic** 

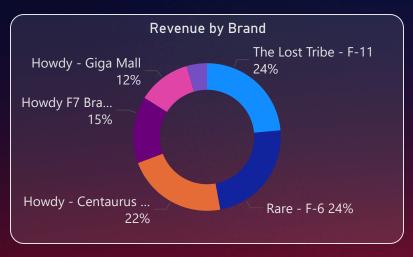
835

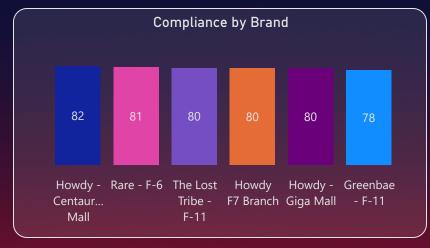
Average R<sup>2</sup>

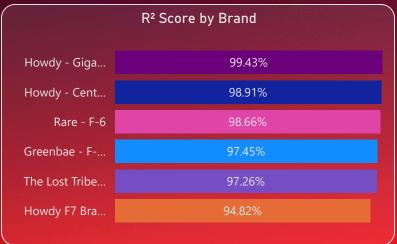
97.8%

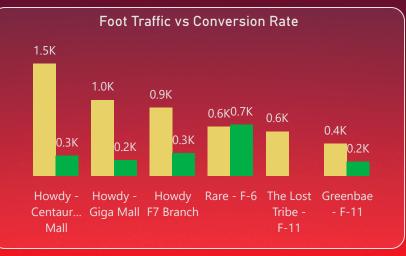
**RMSE** 23156











	Brand		
Greenbae - F-11	Howdy - Giga Mall	Rare - F-6	
Howdy - Centaurus Mall	Howdy F7 Branch	The Lost Tribe - F-11	

Brand	Actual Sales	Predicted Sales
Greenbae - F-11	82,082.68	82,949.81
<b>Howdy - Centaurus Mall</b>	408,493.30	408,286.37
Howdy - Giga Mall	214,621.10	215,285.72
Howdy F7 Branch	270,024.61	271,220.13
Rare - F-6	434,356.80	433,470.57
The Lost Tribe - F-11	434,558.89	437,257.62

Linear models were evaluated for each brand independently. This page summarizes predictive performance using RMSE and R<sup>2</sup> metrics. Howdy F-7's low fit prompted further machine learning diagnostics.

We tested all outlets. All performed well except F-7 relatively. This warranted ML intervention.



Conversion Rate
12.00%

Average R<sup>2</sup>

Compliance Score

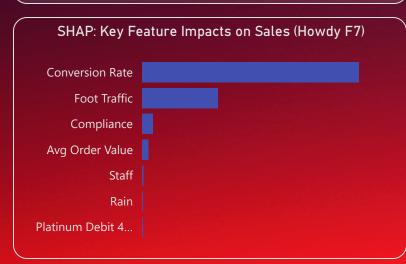
70

RMSE

13873

□ Combo□ None□ Platinum Debit 40% Off

## Simulation Condition Dry + Combo Promo + Low Traffic Mixed Conditions Dein + Combo Bronzo + Mid Traffic









## Recommendation

💡 Switch Promo — Combo Underperforming

The simulation engine ran over **4,000 business scenarios** across rain, promo, staff, and traffic conditions. It flagged **50+ cases** with 4+ staff and predicted sales under Rs 115k as inefficient. **Debit 40% Off** performed well in rainy conditions

Avg Order Value (PKR)

1150

Max Predicted Sales (PKR)

113753

Risk Flag

Moderate

conditions.

Min Predicted Sales (PKR)

100760



To understand the impact of different marketing strategies, we simulated sales for the Howdy F7 outlet using a trained Random Forest model. We varied foot traffic, weather, staffing, and promotion type.

The model predicted that the **Combo** promotion consistently outperformed both **Platinum Debit 40% Off** and **No Promotion**, achieving up to Rs114,000 in simulated sales. This demonstrates the model's ability to support strategic planning by quantifying the revenue uplift potential of specific interventions under varying real-world