



Customer Segmentation

Using Machine Learning (KMeans Clustering)



Hackathon 2026 — BBAI & DS

⌚ Problem Statement

Why Customer Segmentation?

- 🛒 Companies like Amazon & Flipkart have millions of customers
- ⌚ Targeted marketing saves time & money
- ❓ Real-world use: personalized offers, retention campaigns
- 👤 Not all customers behave the same way
- ↗ Group similar customers → better business decisions

Data → Model → Deploy

 Dataset from Kaggle — 200

 Features: Age, Annual Income, Spending Score (1–100)

 Cleaned data, handled nulls, scaled features

 Applied KMeans Clustering (unsupervised ML)

 Built a modern web UI to predict segments live



How We Built It

1

Data Prep

- Removed null values
- Feature scaling
- Exploratory analysis

2

Modeling

- Elbow method for K
- KMeans with K=4
- Silhouette score validation

3

Deployment

- React + Tailwind UI
- Real-time prediction
- Color-coded segments

Results

4 Customer Segments Discovered



Careful Spenders

Budget-conscious



High-Value

Premium buyers



At-Risk

Impulsive buyers



Low Engagement

Need campaigns

 Live Demo

Let's See It In Action!

Enter customer data → get instant segment prediction
with our beautiful dashboard

Age 35

Income \$80,000

Spending Score 72



High-Value Customer

Switch to the dashboard for a live demo →



Thank You!

Questions? We'd love to hear them 

 2 min Q&A

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