SEMESTER PROJECT (4TH SEM 2023-2027)

ZOMATO RESTAURANT PREDICTION MODEL

USING
PYTHON
MACHINE LEARNING
FLASK
HTML , CSS

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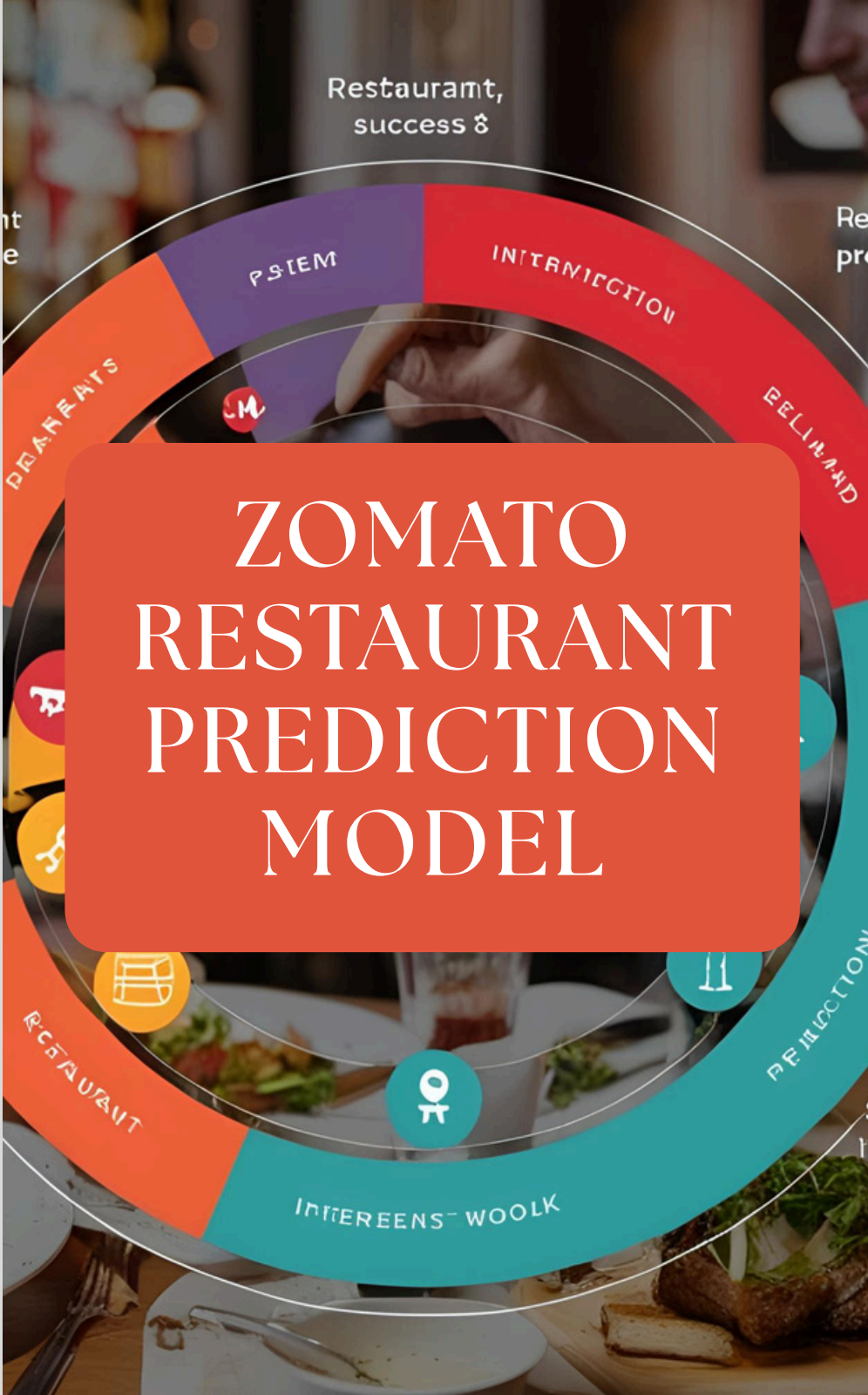
4TH SEMESTER



ZOMATO RESTAURANT PREDICTION MODEL

EMPOWER RESTAURANT OWNERS AND DECISION-MAKERS WITH MY ZOMATO RESTAURANT SUCCESS PREDICTION MODEL, AN AI-POWERED TOOL THAT PREDICTS THE FUTURE PERFORMANCE OF RESTAURANTS ON THE ZOMATO PLATFORM. BY ANALYZING CRITICAL FEATURES LIKE COST, RATINGS, AND USER ENGAGEMENT, THE MODEL PROVIDES ACTIONABLE INSIGHTS TO DETERMINE IF A RESTAURANT IS LIKELY TO THRIVE OR FACE CHALLENGES.

✨ HOW IT WORKS:

DATA COLLECTION:

- THE MODEL IS TRAINED ON A DATASET CONTAINING DETAILED INFORMATION ABOUT:
  - RESTAURANT ID
  - AVERAGE COST FOR TWO
  - CUSTOMER RATINGS
  - NUMBER OF VOTES
  - LOCATION DETAILS
  - CUISINE TYPE
- THIS DATA HELPS THE MODEL UNDERSTAND HOW THESE FACTORS IMPACT RESTAURANT PERFORMANCE ON ZOMATO.

PREDICTION LOGIC:

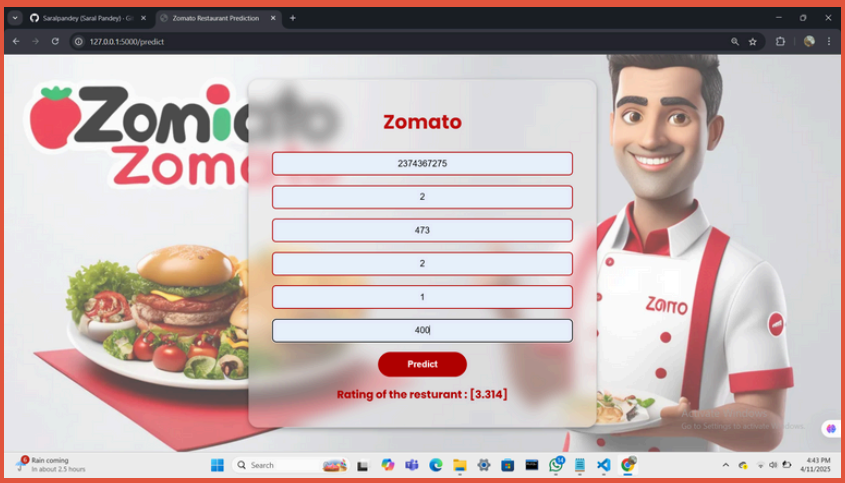
- USES SUPERVISED MACHINE LEARNING ALGORITHMS SUCH AS LOGISTIC REGRESSION, RANDOM FOREST, AND GRADIENT BOOSTING.
- WHEN A USER INPUTS DETAILS LIKE RESTAURANT ID, COST, AND RATING, THE MODEL:
  - ANALYZES THE GIVEN PARAMETERS.
  - PREDICTS WHETHER THE RESTAURANT IS LIKELY TO SUCCEED OR STRUGGLE ON ZOMATO IN THE FUTURE

- WEB DEPLOYMENT:

- THE SYSTEM IS DEPLOYED USING FLASK, WITH A HTML/CSS FRONT-END FOR USER INTERACTION.
- RESTAURANT OWNERS AND ANALYSTS CAN INPUT RESTAURANT DETAILS AND INSTANTLY VIEW THE PREDICTION.

- INTERACTIVE DASHBOARD:

- DISPLAYS THE PREDICTION AS "LIKELY TO SUCCEED" OR "AT RISK".
- PROVIDES VISUAL INSIGHTS TO UNDERSTAND WHY A CERTAIN PREDICTION WAS MADE.



🚀 USEFULNESS:

INFORMED DECISION-MAKING: HELPS RESTAURANT OWNERS UNDERSTAND THEIR STANDING AND AREAS FOR IMPROVEMENT.

ZOMATO OPTIMIZATION: ASSISTS ZOMATO IN DECIDING WHICH RESTAURANTS TO FEATURE OR PROMOTE.

BUSINESS INSIGHTS: PROVIDES DATA-DRIVEN INSIGHTS INTO PRICING, RATINGS, AND CUSTOMER ENGAGEMENT.

🔍 TECHNOLOGIES USED:

- PROGRAMMING LANGUAGE: PYTHON
- FRAMEWORK: FLASK
- FRONT-END: HTML, CSS
- MACHINE LEARNING TECHNIQUES: LOGISTIC REGRESSION, RANDOM FOREST, GRADIENT BOOSTING
- LIBRARIES: PANDAS, NUMPY, SCIKIT-LEARN, MATPLOTLIB, SEABORN
- DEPLOYMENT: FLASK APP HOSTED LOCALLY OR ON THE CLOUD

GITHUB REPOSITORY LINK IS HERE

HTTPS://GITHUB.COM/SARALPANDEY/ZOMATO-MODEL