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NATIONAL UNIVERISTY OF COMPUTER AND EMERGING SCIENCES
DEPARTMENT OF COMPUTER SCIENCE

INTELLICART

Freshness at your Fingertips

Supervisor: Dr. Muhammad Farrukh Shahid

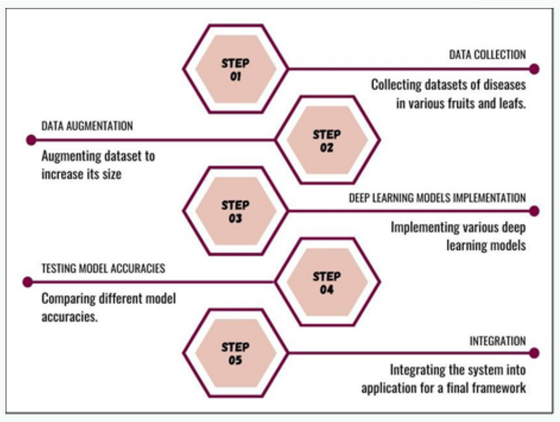
ABSTRACT

'IntelliCART': revolutionizing fruit and vegetable shopping with real-time quality assessment, government pricing validation, and GPS-based cart location services. Customers enjoy enhanced trust and convenience, while vendors build relationships and maintain pricing integrity. It's a win-win for all!

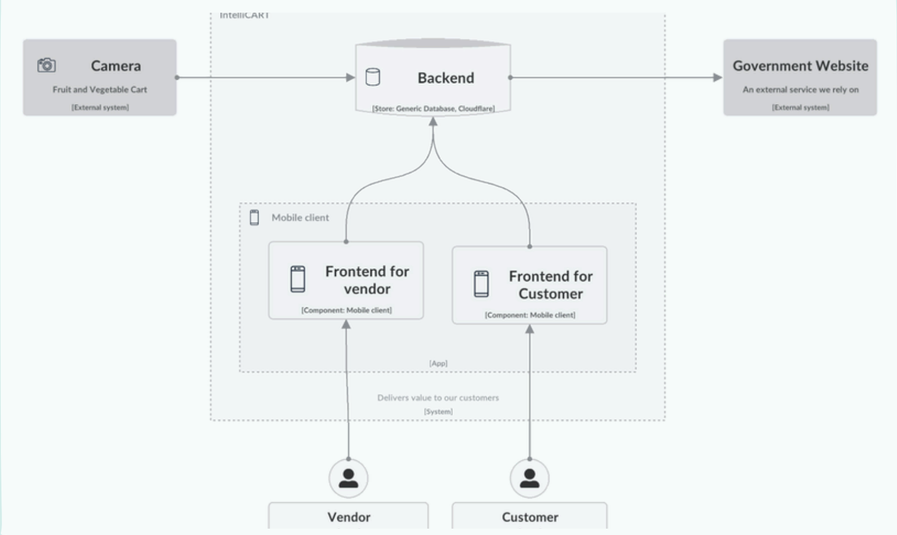
OBJECTIVES

1. Quality assessment via image analysis & deep learning.
2. Model training & evaluation.
3. Integration of top model in IntelliCART app.
4. Govt. pricing validation.
5. GPS-based location services.
6. User-friendly solution for boosted sales, satisfaction, loyalty, & economic growth in fresh goods retail.

METHODOLOGY

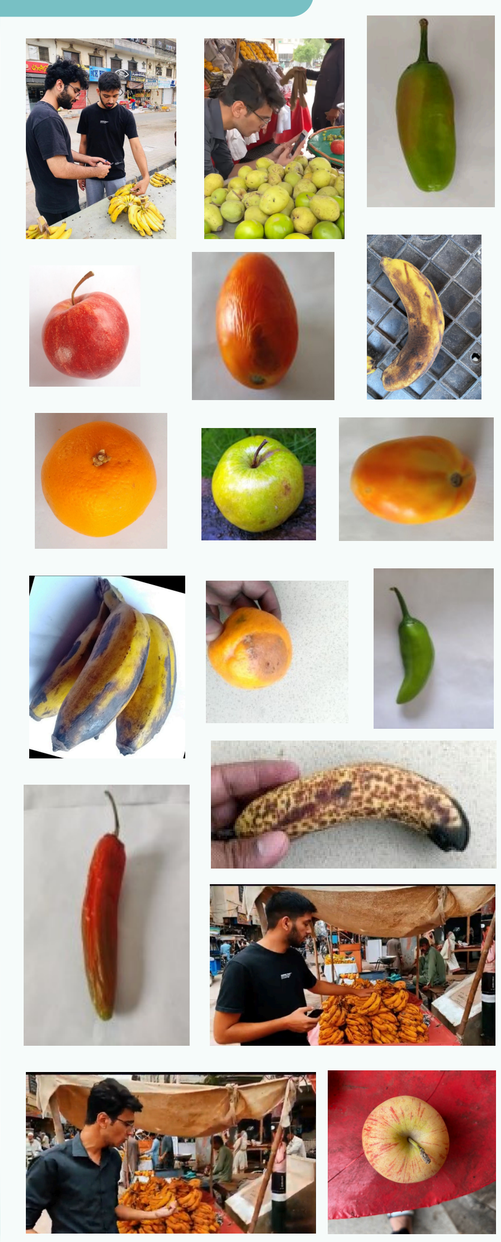


SYSTEM ARCHITECTURE



PROPOSED SCENARIO

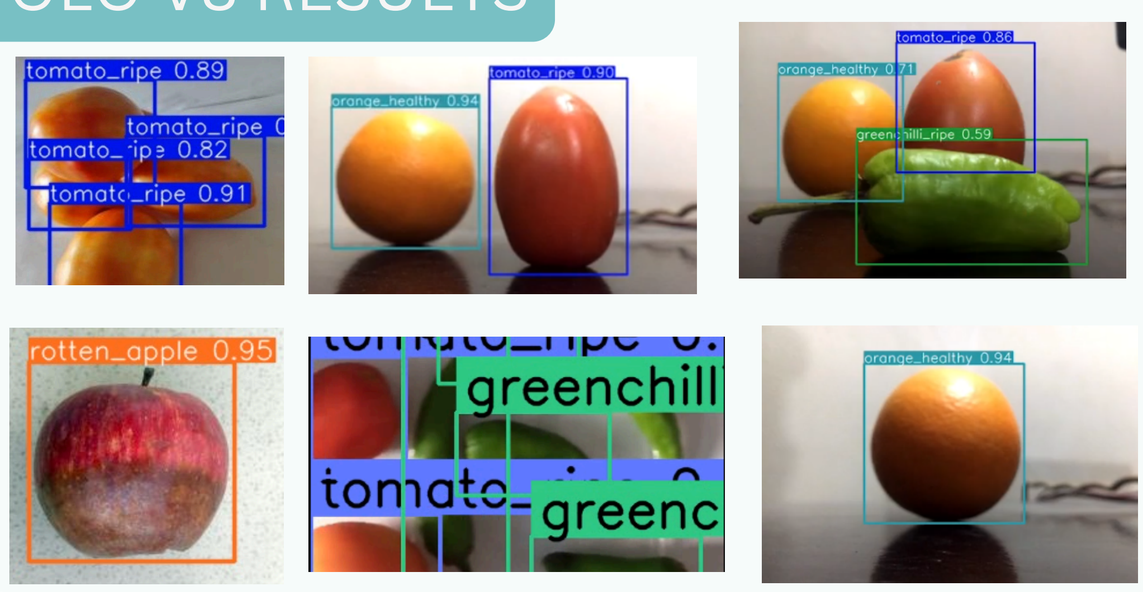
DATASET



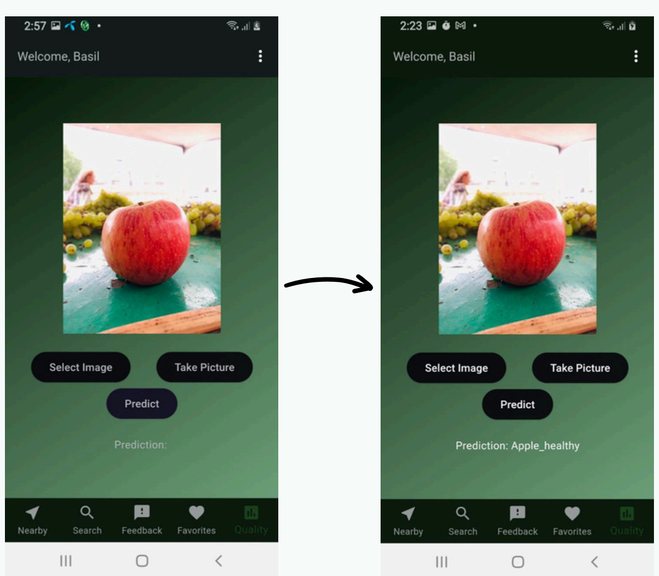
MODEL RESULTS

Model	Accuracy
MobileNet	94.925%
ResNet	93.930%
AlexNet	92.437%
VGG16	92.288%
VGG19	92.039%
Inception-V3	89.203%

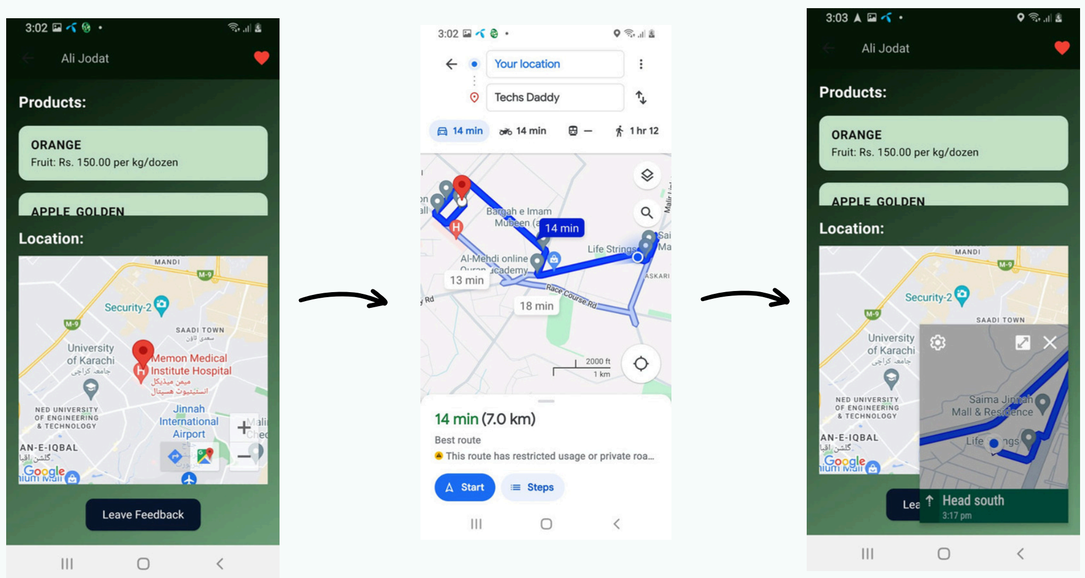
YOLO V8 RESULTS



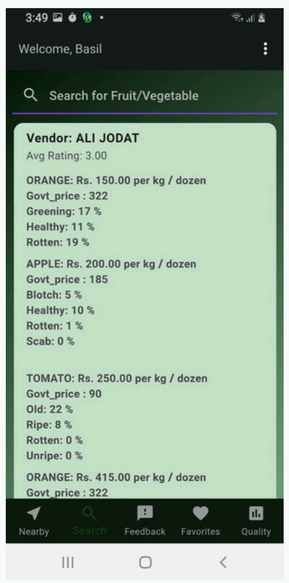
UI RESULTS



Customer Side Quality Assesment



Nearby Vendor Carts and Location Tracking



Government Prices
Real time Quality Assessment

TOOLS USED

Flutter, ultralytics YOLO, Dart, FastAPI, Google Maps, aws, python, Firebase

APPLICATION FEATURES

1. Login and Sign up (Customer/Vendor Side)
2. Add/Update/Delete Product (Vendor Side)
3. Nearby Vendor Carts and Track Location (Customer Side)
4. Government Price Integration (Customer/Vendor Side)
5. Quality assessment (Customer/Vendor Side)
6. Search Vendor Carts by Product name (Customer Side)
7. Feedback and Favorites (Customer Side)
8. Dashboard (Vendor Side)

ACHIEVEMENTS

Selected and Participated in Jazz Hackathon in 5G Centre NUST Islamabad