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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

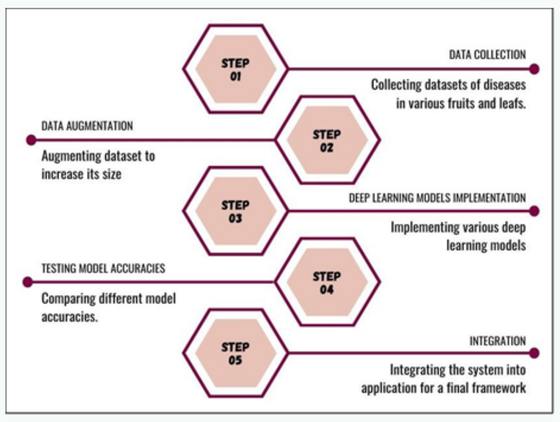
ABSTRACT

'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!

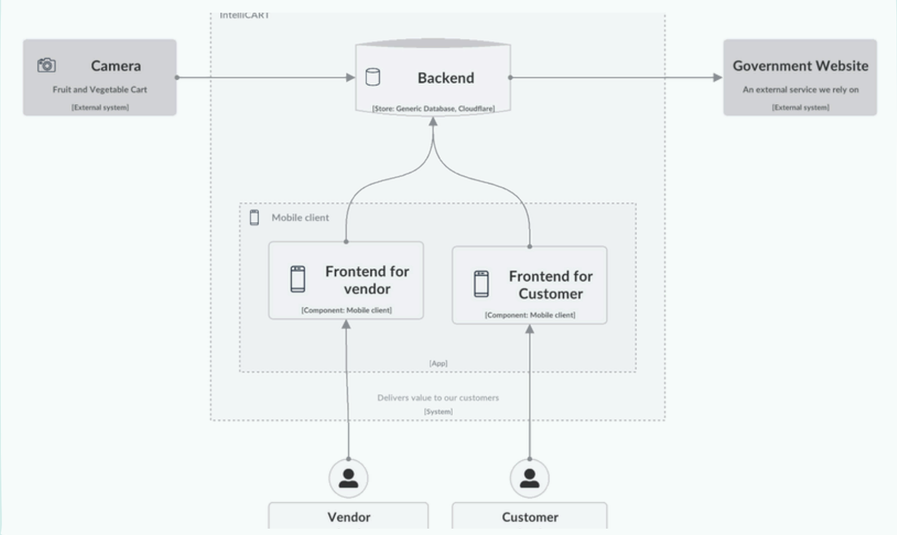
OBJECTIVES

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

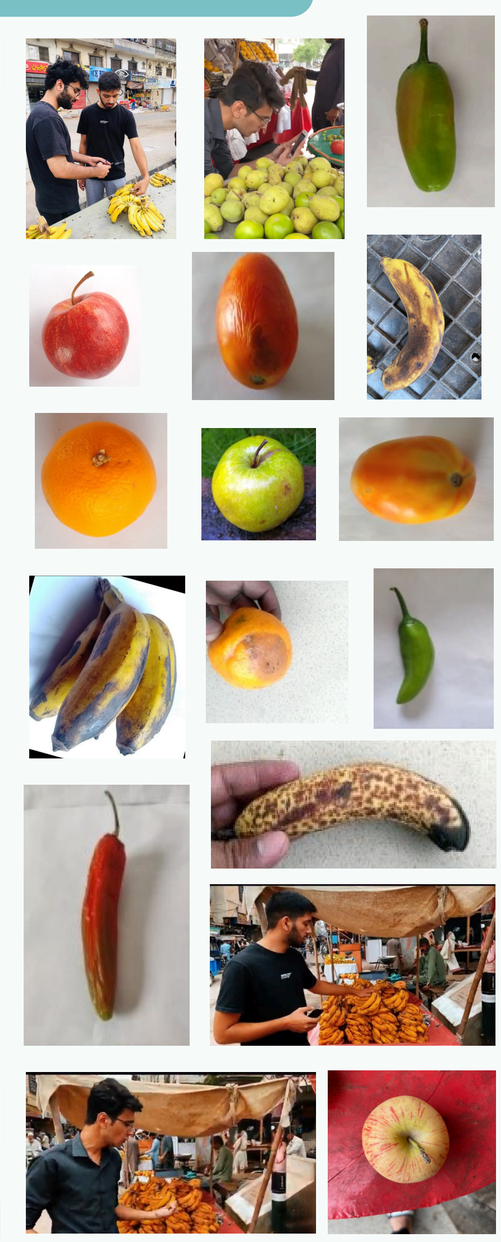


SYSTEM ARCHITECTURE



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

APPLICATION FEATURES

- Login and Sign up (Customer/Vendor Side)
- Add/Update/Delete Product (Vendor Side)
- Nearby Vendor Carts and Track Location (Customer Side)
- Government Price Integration (Customer/Vendor Side)
- Quality assessment (Customer/Vendor Side)
- Search Vendor Carts by Product name (Customer Side)
- Feedback and Favorites (Customer Side)

TECHNOLOGIES

Flutter
Google Maps
ultralytics YOLOv8
Dart
Firebase

CONCLUSION

Our solution is an important step towards addressing demand for fresh and healthy food with the authenticity of prices. Our solution involves modern cutting edge technologies that includes computer vision, cloud, application development, and (GPS) to provide customer with freshness and price validation transparency. All above mentioned technologies merging in single platform will result in customer vendor strong relationship build on trust and fair market competition among vendors.