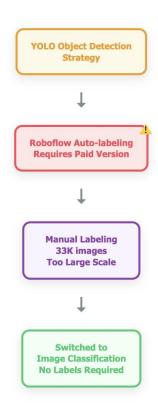
III Phase 1: Data Preparation

Dataset Processing & Sampling Strategy



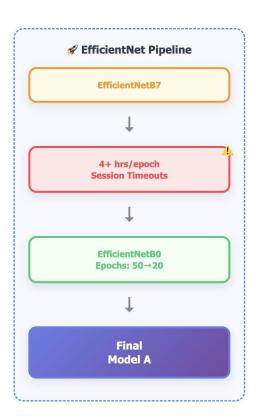
The Phase 2: Initial Approach

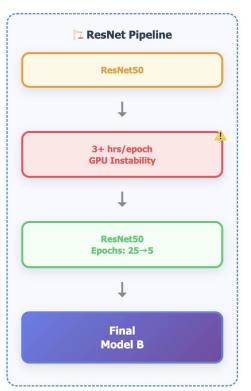
YOLO Strategy → Switched to Classification



Phase 3: Classification Architecture

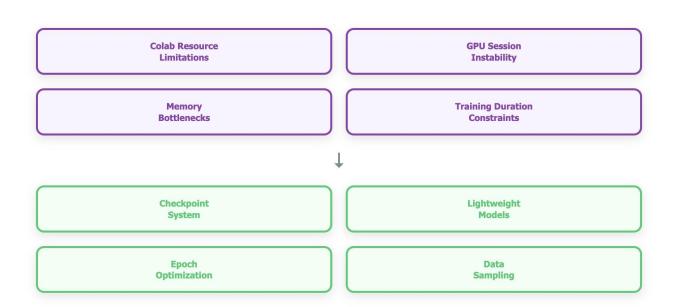
Parallel Model Development





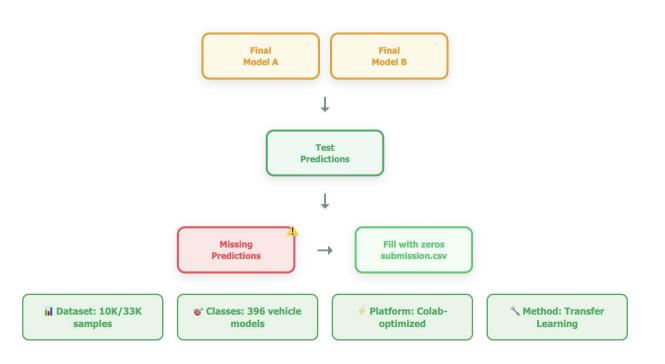
A Phase 4: Technical Constraints

Challenges & Solutions



✓ Phase 5: Evaluation & Deployment

Model Performance & Results



Phase 6: Future Enhancements

Roadmap for Improved Performance

Cloud Setup (AWS/GCP) Use Full Dataset Training Advanced Models (ViT, ConvNeXt)

Ensemble Techniques

Combine Models (Detection + Classification)