

# Ensemble Optimized Learning Framework for Early Cancer Detection (EarlyCancerDF)

## Non-invasive Liquid Biopsy (NLB) Data

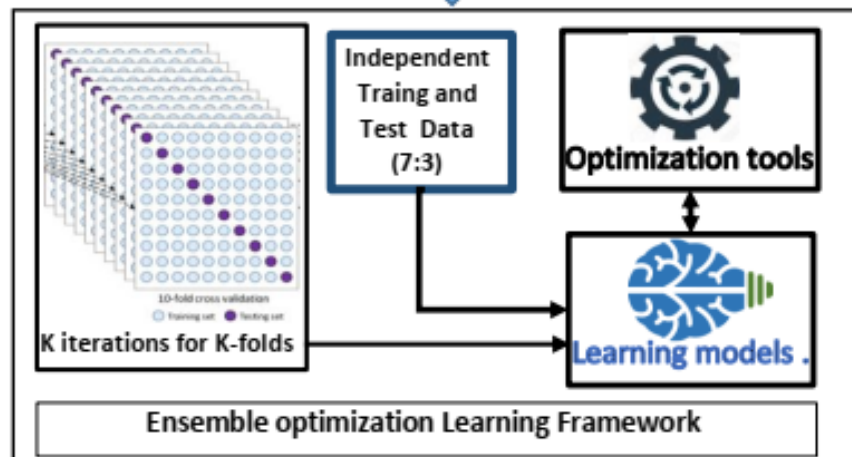


WGS cfDNA Fragmentation profile  
Chromosomal copy number  
mtDNA, cfRNA, Mutation in cfDNA,  
Protein Molecular Biomarkers  
CTC, Exosome

Data collection and preprocessing

Fragmentation size, GC Corrected cfDNA profiles,  
Mutation in cfDNA, Median fragment profile  
ratio, Fraction map to Mitochondrial genome  
Chromosomal copy numbers  
Protein biomarkers

Data analysis and Feature selection using bRFE



Classification and prediction Results



Model Evolution Scores  
(Accuracy, Sensitivity, ROC)

