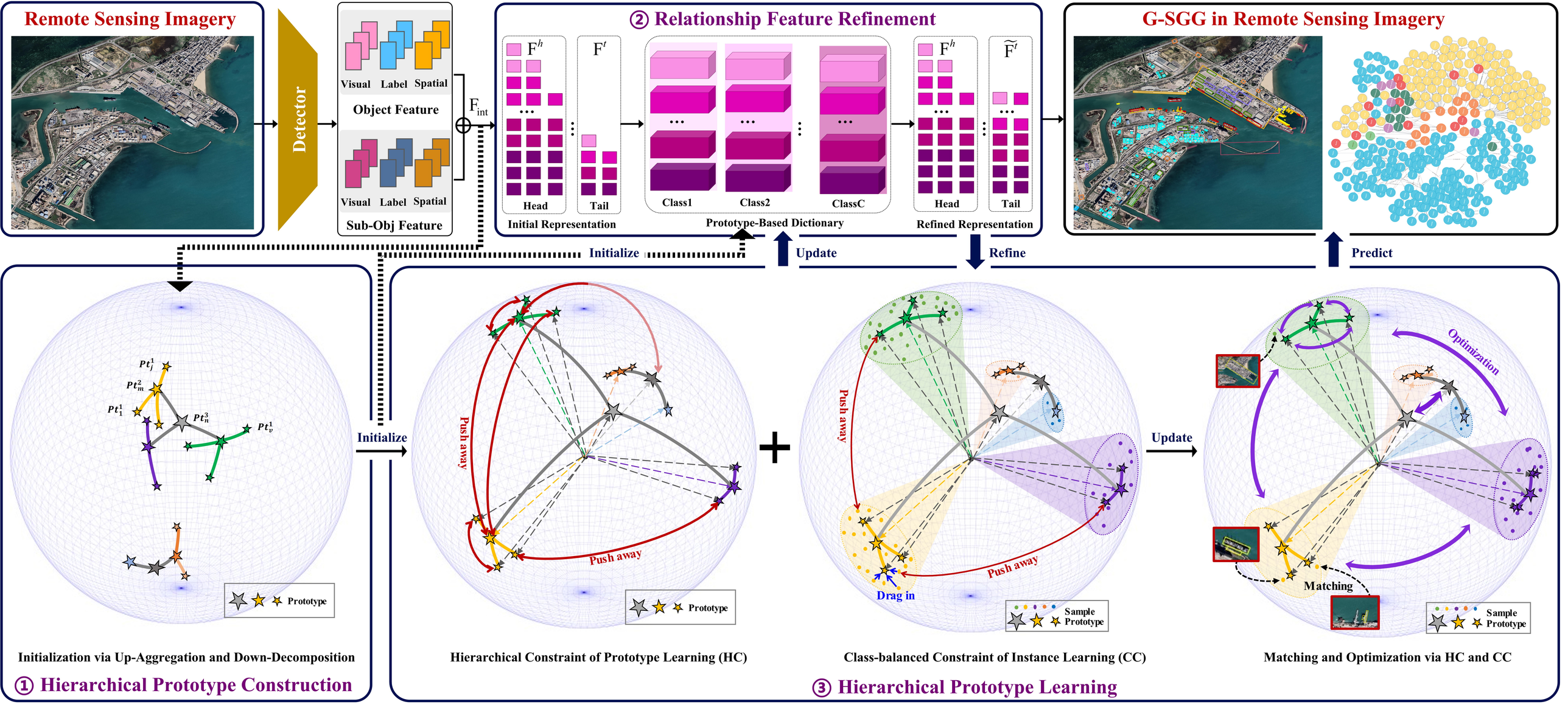
Remote Sensing Imagery
Detector
Visual
Label
Spatial
Object Feature
Visual
Label
Spatial
Sub-Obj Feature
F_{int}
② Relationship Feature Refinement
F^h
F^t
Head
Tail
Initial Representation
Class1
Class2
ClassC
Prototype-Based Dictionary
F^h
$\widetilde{F}^t$
Head
Tail
Refined Representation
G-SGG in Remote Sensing Imagery
Initialize
Update
Refine
Predict
Pt_j^1
Pt_m^2
Pt_1^1
Pt_n^3
Pt_v^1
Prototype
Initialization via Up-Aggregation and Down-Decomposition
① Hierarchical Prototype Construction
Initialize
Push away
Push away
Prototype
Hierarchical Constraint of Prototype Learning (HC)
Push away
Push away
Drag in
Sample
Prototype
Class-balanced Constraint of Instance Learning (CC)
Update
Optimization
Matching
Sample
Prototype
Matching and Optimization via HC and CC
③ Hierarchical Prototype Learning