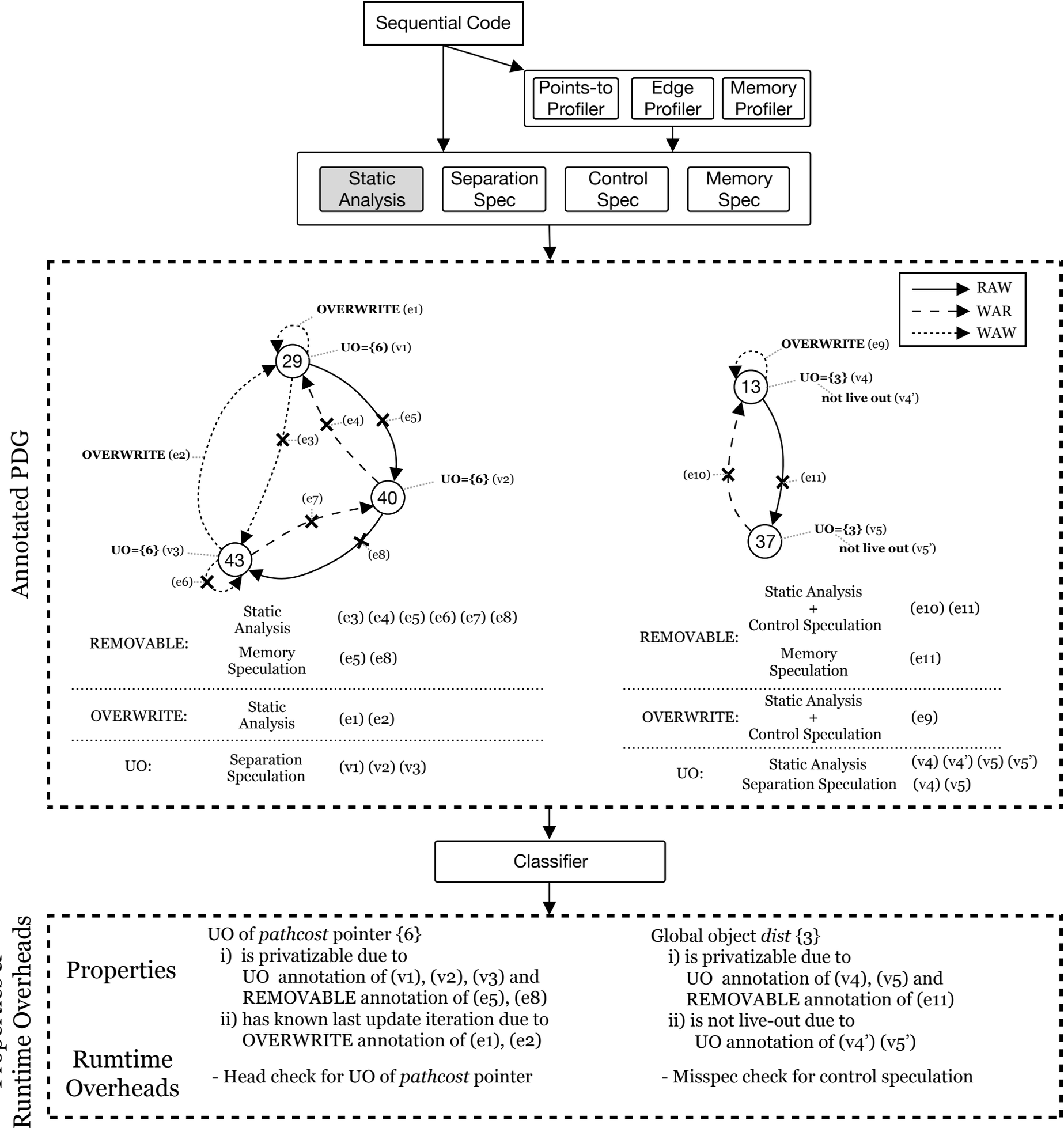
Sequential Code
Points-to Profiler
Edge Profiler
Memory Profiler
Static Analysis
Separation Spec
Control Spec
Memory Spec
Annotated PDG
RAW
WAR
WAW
OVERWRITE (e1)
UO={6} (v1)
29
(e4)
(e5)
(e3)
OVERWRITE (e2)
UO={6} (v2)
40
(e7)
UO={6} (v3)
43
(e8)
(e6)
REMOVABLE:
Static Analysis
(e3) (e4) (e5) (e6) (e7) (e8)
Memory Speculation
(e5) (e8)
OVERWRITE:
Static Analysis
(e1) (e2)
UO:
Separation Speculation
(v1) (v2) (v3)
OVERWRITE (e9)
UO={3} (v4)
not live out (v4')
13
(e10)
(e11)
37
UO={3} (v5)
not live out (v5')
REMOVABLE:
Static Analysis + Control Speculation
(e10) (e11)
Memory Speculation
(e11)
OVERWRITE:
Static Analysis + Control Speculation
(e9)
UO:
Static Analysis
(v4) (v4') (v5) (v5')
Separation Speculation
(v4) (v5)
Classifier
Properties & Runtime Overheads
Properties
UO of pathcost pointer {6}
i) is privatizable due to
UO annotation of (v1), (v2), (v3) and
REMOVABLE annotation of (e5), (e8)
ii) has known last update iteration due to
OVERWRITE annotation of (e1), (e2)
Global object dist {3}
i) is privatizable due to
UO annotation of (v4), (v5) and
REMOVABLE annotation of (e11)
ii) is not live-out due to
UO annotation of (v4') (v5')
Rumtime Overheads
- Head check for UO of pathcost pointer
- Misspec check for control speculation