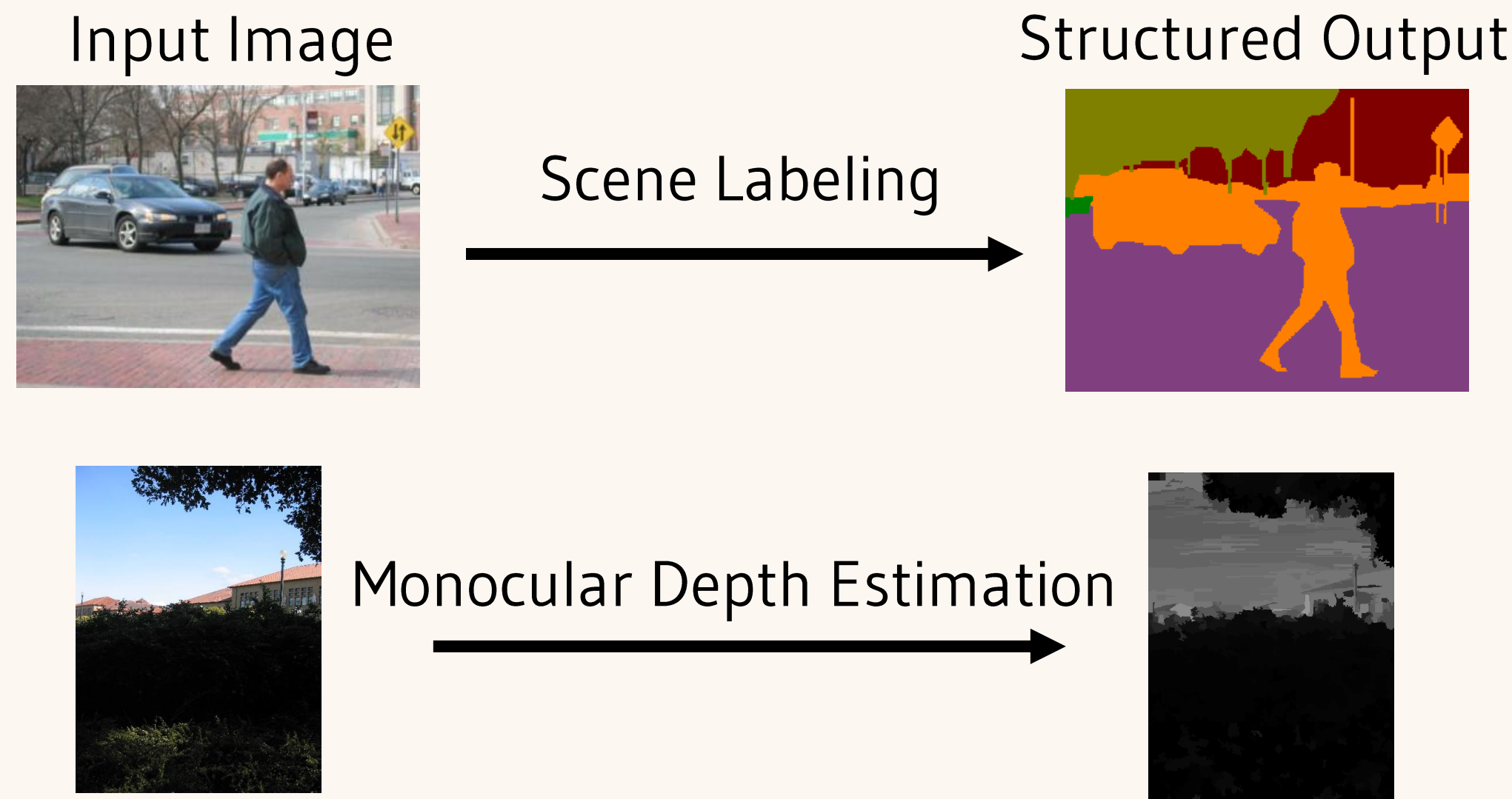


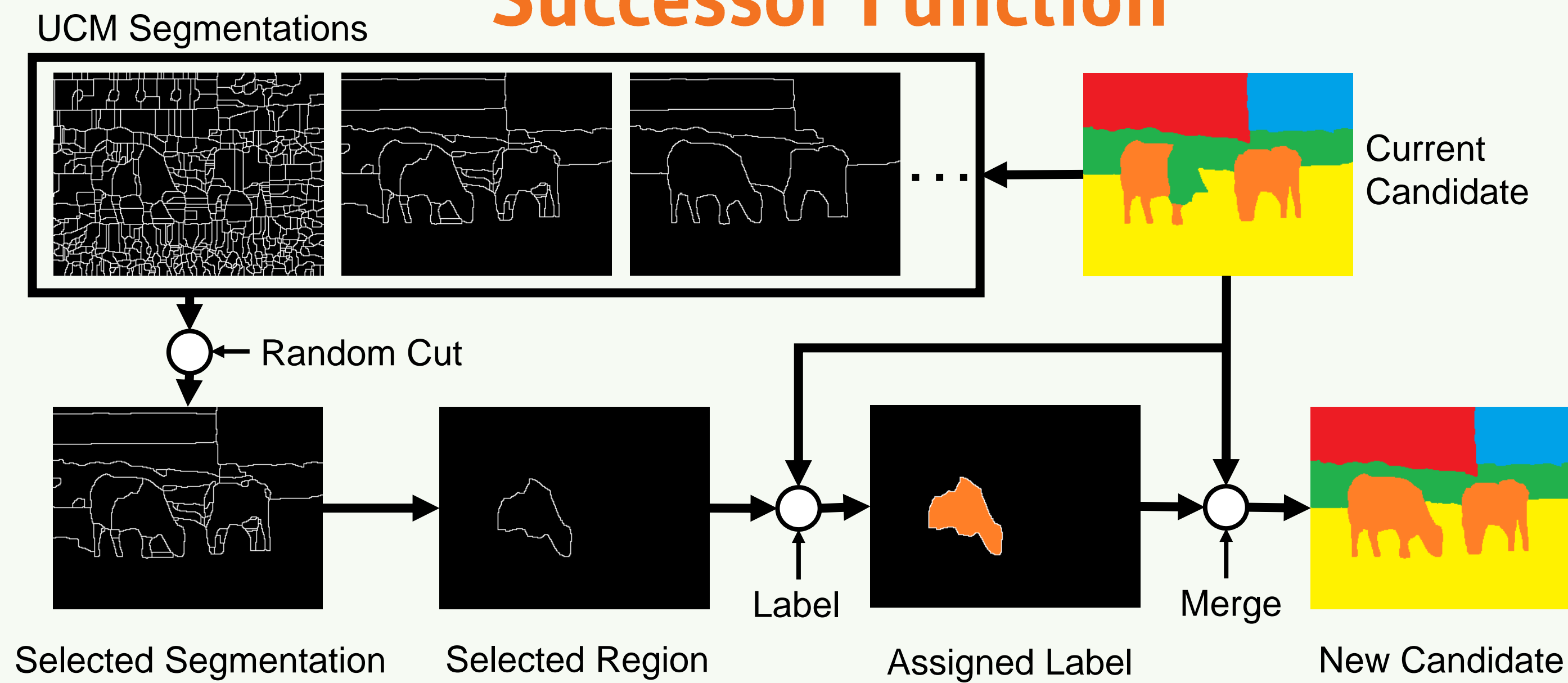
Problem: Structured Prediction



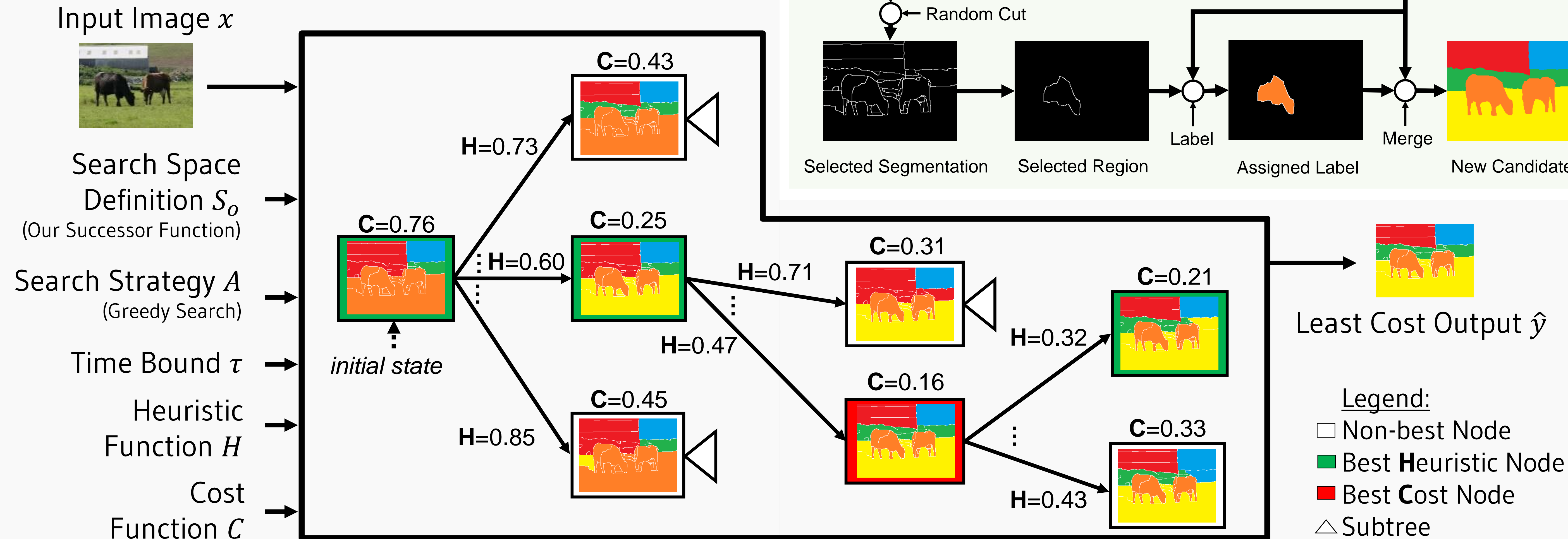
Contributions

1. Search-based structured prediction: HC-Search
2. Successor function for generating candidate states
3. DAgger for robustly learning search heuristics

Successor Function



HC-Search



Results

Semantic Segmentation

Method	Accuracy (%)
Gould et al. ICCV 09	76.4
Munoz et al. ECCV 10	76.9
Socher et al. ICML 11	78.1
Farabet et al. PAMI 13 ConvNet	78.8
Farabet et al. PAMI 13 ConvNet + NN	80.4
Farabet et al. PAMI 13 ConvNet + CRF	81.4
Lempitsky et al. NIPS 11 (No Bnd)	81.3
Lempitsky et al. NIPS 11	81.9
Ours	81.4

Monocular Depth Estimation

Method	Relative Error	Log-10 Error
Saxena et al. ICCV 07	.530	.198
Saxena et al. PAMI 08 Pointwise MRF	.458	.149
Saxena et al. PAMI 08 Superpixel MRF	.370	.187
Hoiem et al. IJCV 07	1.423	.320
Liu et al. CVPR 10	.375	.148
Karsch et al. ECCV 12	.361	.148
Ours	.364	.148

