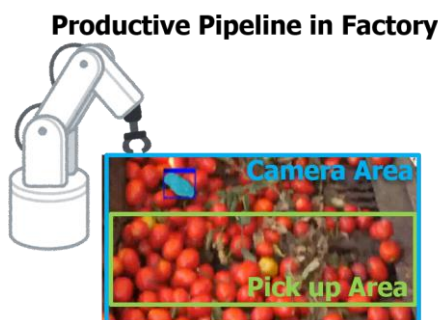


Hardware-Friendly Spatial-Temporal Network with Millisecond Streaming Updating for Dynamic Semantic Segmentation in Factory Automation

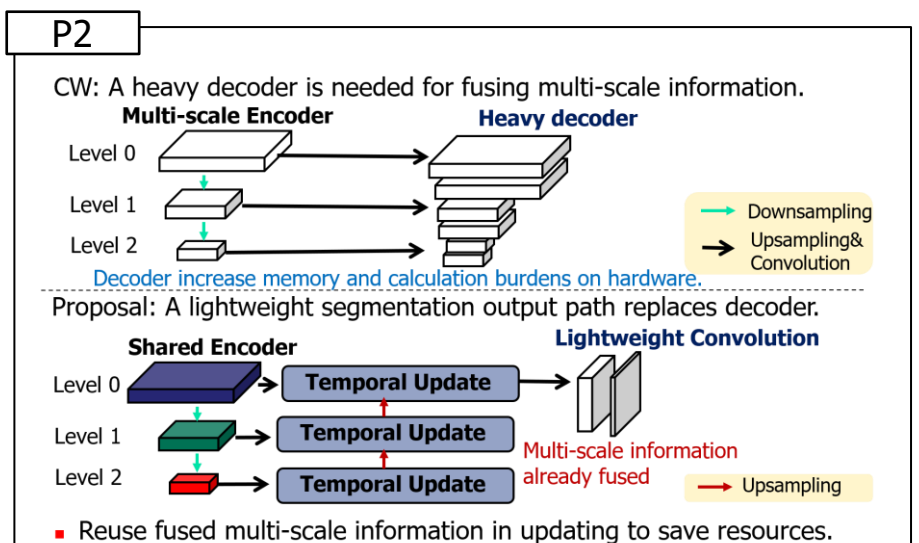
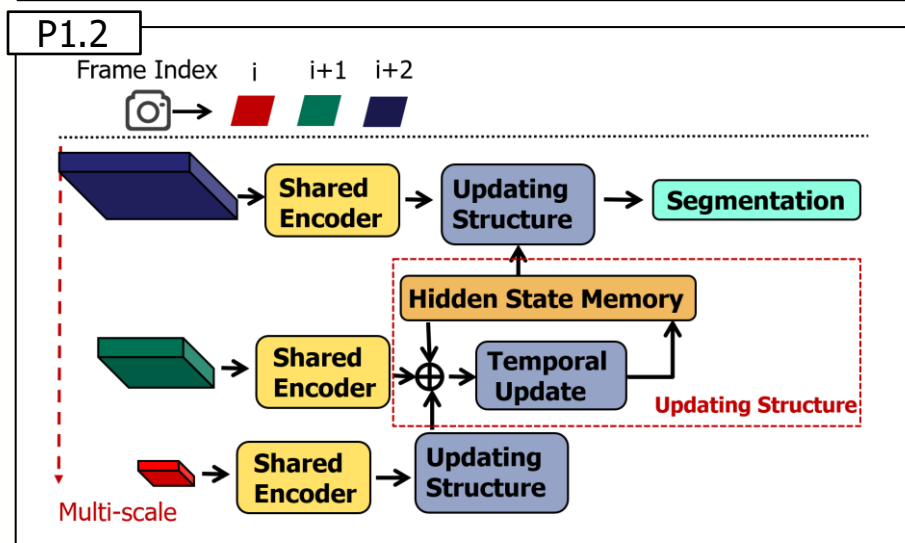
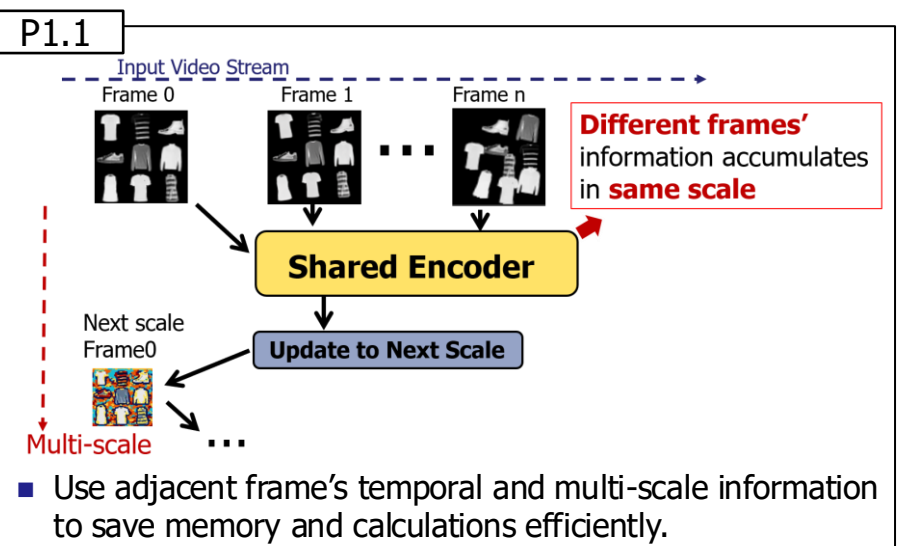
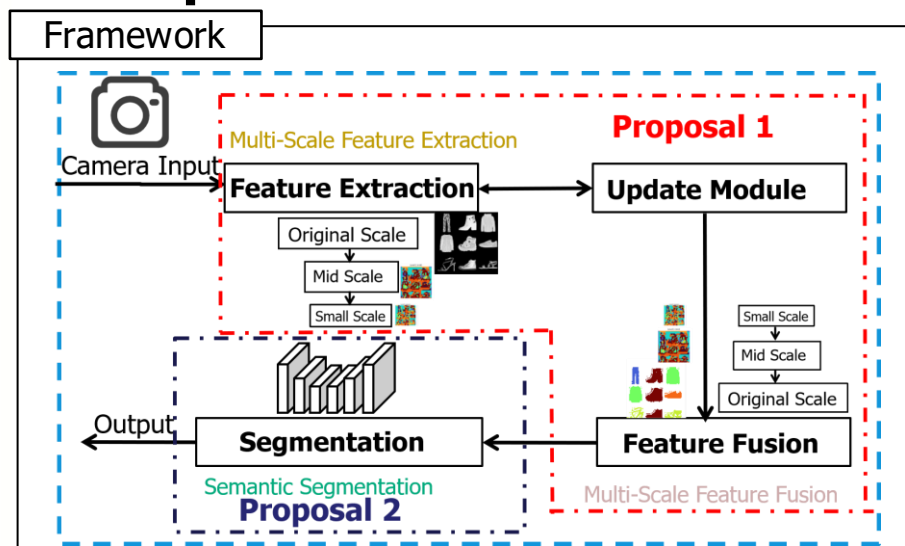
曹 恒源 池永研究室 修士課程修了

Background

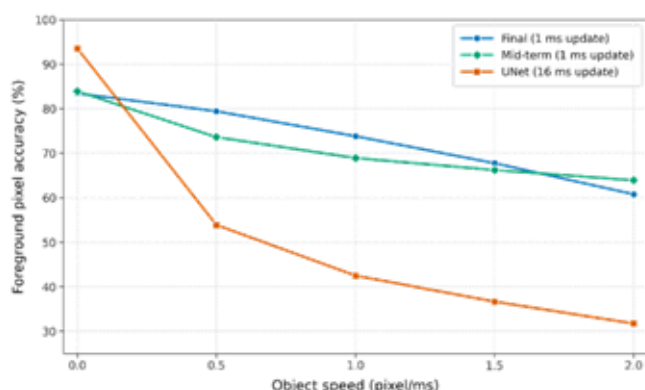
- Dynamic Semantic Segmentation for Randomly Moving Objects in FA.



Proposals



Experiment Results



Device		Alveo V80
Resource utilization	LUT	453357 (17.61%)
	URAM	1408(73.14%)
	DSP	8852(81.60%)
Performance	Frequency	200 MHz
	Delay	0.8966ms

Conclusion

- The proposed system Reaches the accuracy of 83.41% to 60.77% with input object speeds from 0 to 2.0 pixel/ms.
- Delay decreased to 896.620us on hardware simulation.

