## Mix-QSAM: Mixed-Precision Quantization of the Segment Anything Model Supplementary Material

Navin Ranjan Andreas Savakis Rochester Institute of Technology, Rochester, New York 14623, USA nr4325@rit.edu andreas.savakis@rit.edu



Figure 1. Qualitative comparison of instance segmentation on the COCO dataset using a 4-bit Segment Anything Model (SAM) with YOLOX bounding boxes as prompts. (a) Original images; (b) Full-precision SAM; (c) 4-bit PTQ4SAM-S without reconstruction; (d) 4-bit PTQ4SAM-L with reconstruction; (e) 4-bit Mix-QSAM (ours) without reconstruction.

## **A. Qualitative Results**

To evaluate the effectiveness of our method, we present qualitative instance segmentation results for 4-bit quantization of SAM on the COCO dataset, using YOLOX bounding boxes as prompts (Figure 1). PTQ4SAM-S (without reconstruction) fails to segment objects accurately. Both PTQ4SAM-L (with reconstruction) and our Mix-QSAM preserve object integrity, produce clean boundaries, and retain fine-grained details. However, PTQ4SAM-L incurs significant computational overhead due to its blockwise reconstruction, which involves 20000 iterations. In contrast, Mix-QSAM delivers comparable visual quality without requiring reconstruction, making it a more efficient and practical solution for low-bit deployment.