

Supplementary Material for Few-Shot Anomaly Detection with Adversarial Loss for Robust Feature Representations

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1 Qualitative evaluation

In this supplementary material, we provide the qualitative evaluation of MVTec-AD [1] and DAGM [2] datasets with more samples.

Figures 1, 2, and 3 show the qualitative evaluation of 2-, 4-, and 8-shots between RegAD [1] and RegAD + Ours. Similarly, Figures 4, 5, and 6 show the qualitative evaluation of 2-, 4-, and 8-shots between UniAD [2] and UniAD + Ours. Although most of the heat maps show similar results on the qualitative evaluations, the proposed method generally shows improvements in the quantitative evaluation. There are also some results that the heat maps with the proposed method show more reliable results than those of RegAD and UniAD. Specifically, abnormal regions on the heat maps obtained from the proposed method are more activated, compared to RegAD and UniAD.

Figures 7 and 8 show the qualitative evaluation of the DAGM dataset. Similar to the results on the MVTec AD dataset, although most samples exhibit similar heat maps in the qualitative evaluation, the results with the proposed methods demonstrate performance improvements in the quantitative evaluation. Also in DAGM dataset, some heat maps with the proposed method show more reliable results than those of RegAD and UniAD.

References

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- [2] Chaoqin Huang, Haoyan Guan, Aofan Jiang, Ya Zhang, Michael Spratling, and Yan-Feng Wang. Registration based few-shot anomaly detection. In *Computer Vision—ECCV 2022: 17th European Conference, Tel Aviv, Israel, October 23–27, 2022, Proceedings, Part XXIV*, pages 303–319. Springer, 2022.
- [3] Matthias Wieler and Tobias Hahn. Weakly supervised learning for industrial optical inspection. In *DAGM symposium in*, 2007.
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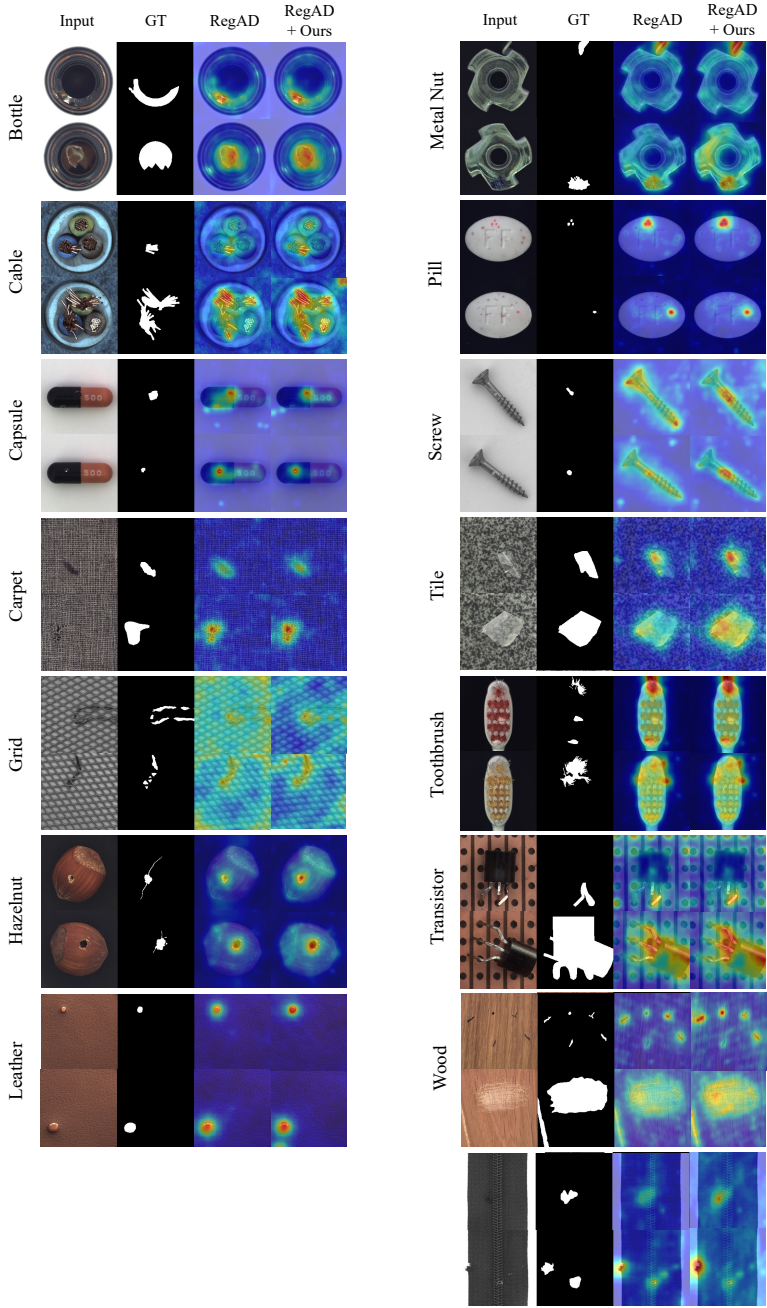


Figure 1: Qualitative evaluation of 2-shot between RegAD [1] and RegAD + Ours on MVTec dataset [1].

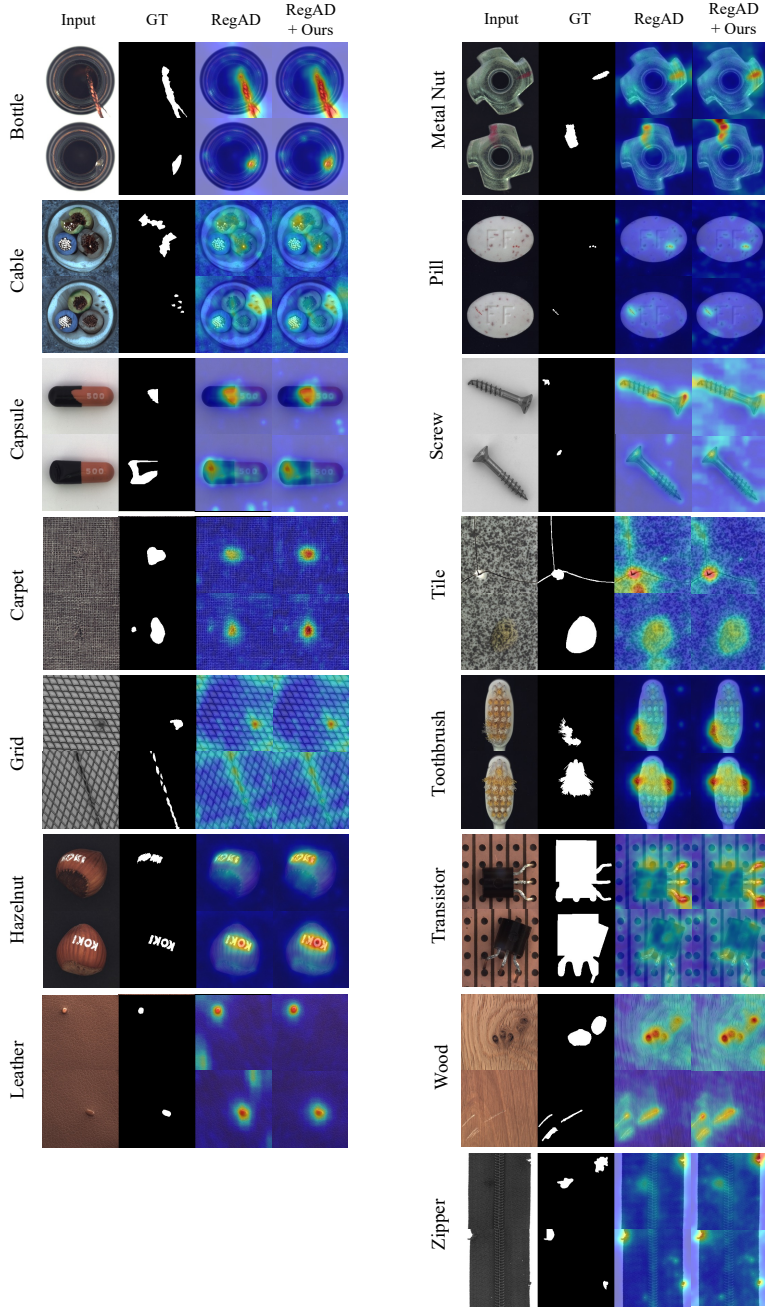


Figure 2: Qualitative evaluation of 4 shot between RegAD [1] and RegAD + Ours on MVTec dataset [1].

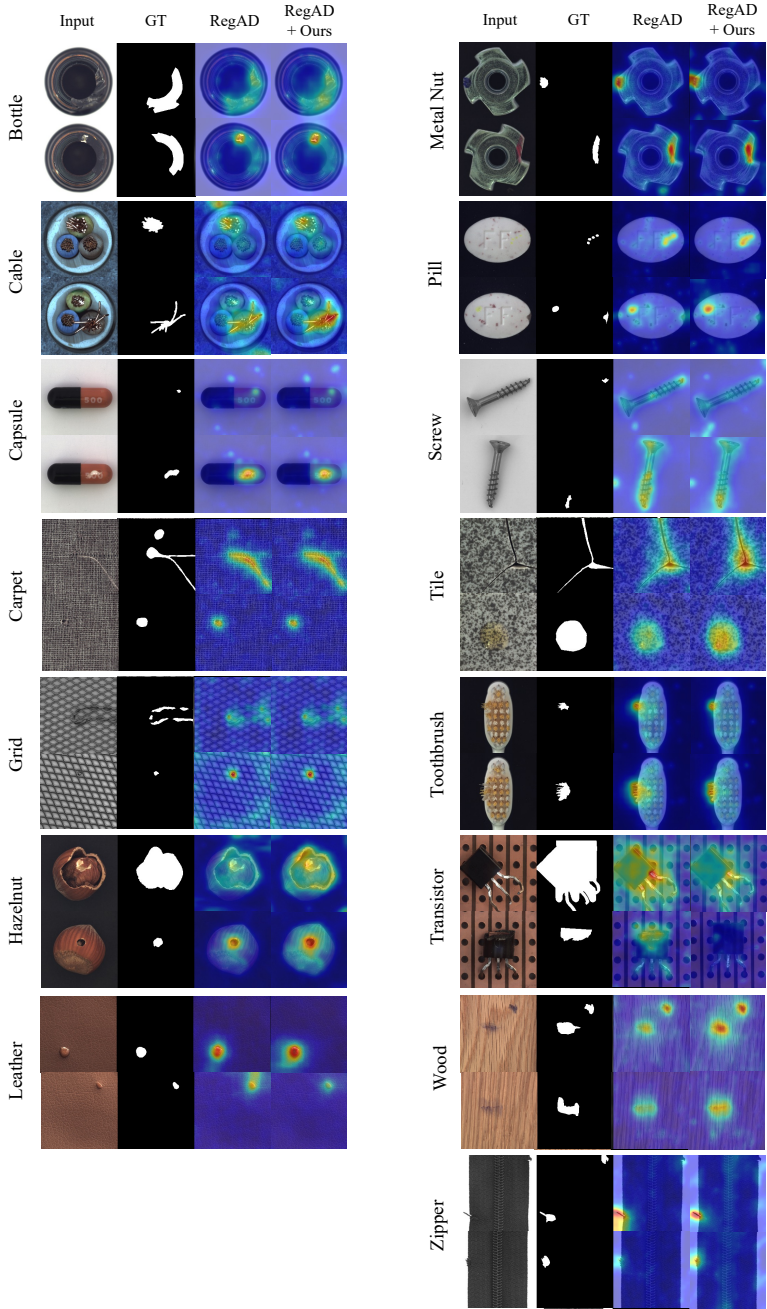


Figure 3: Qualitative evaluation of 8 shot between RegAD [1] and RegAD + Ours on MVTec dataset [1].

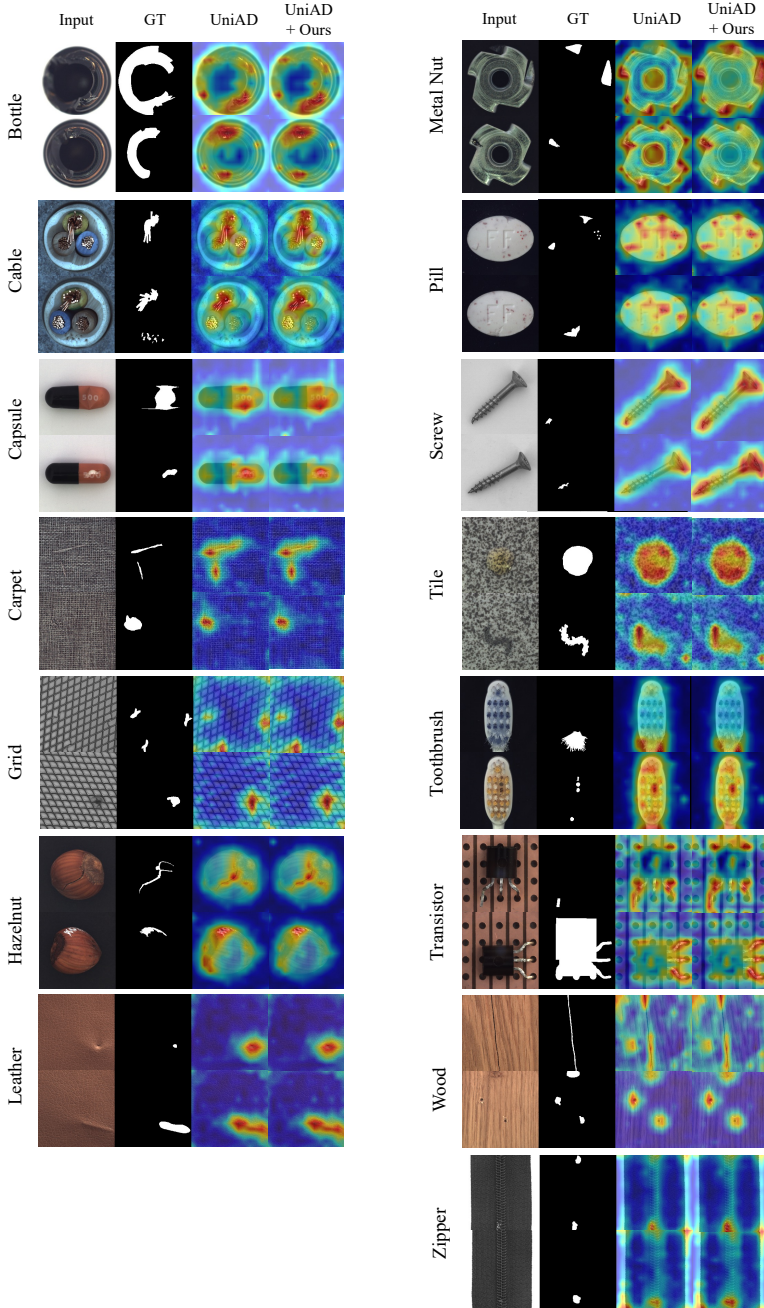


Figure 4: Qualitative evaluation of 2 shot between UniAD [1] and UniAD + Ours on MVTec dataset [1].

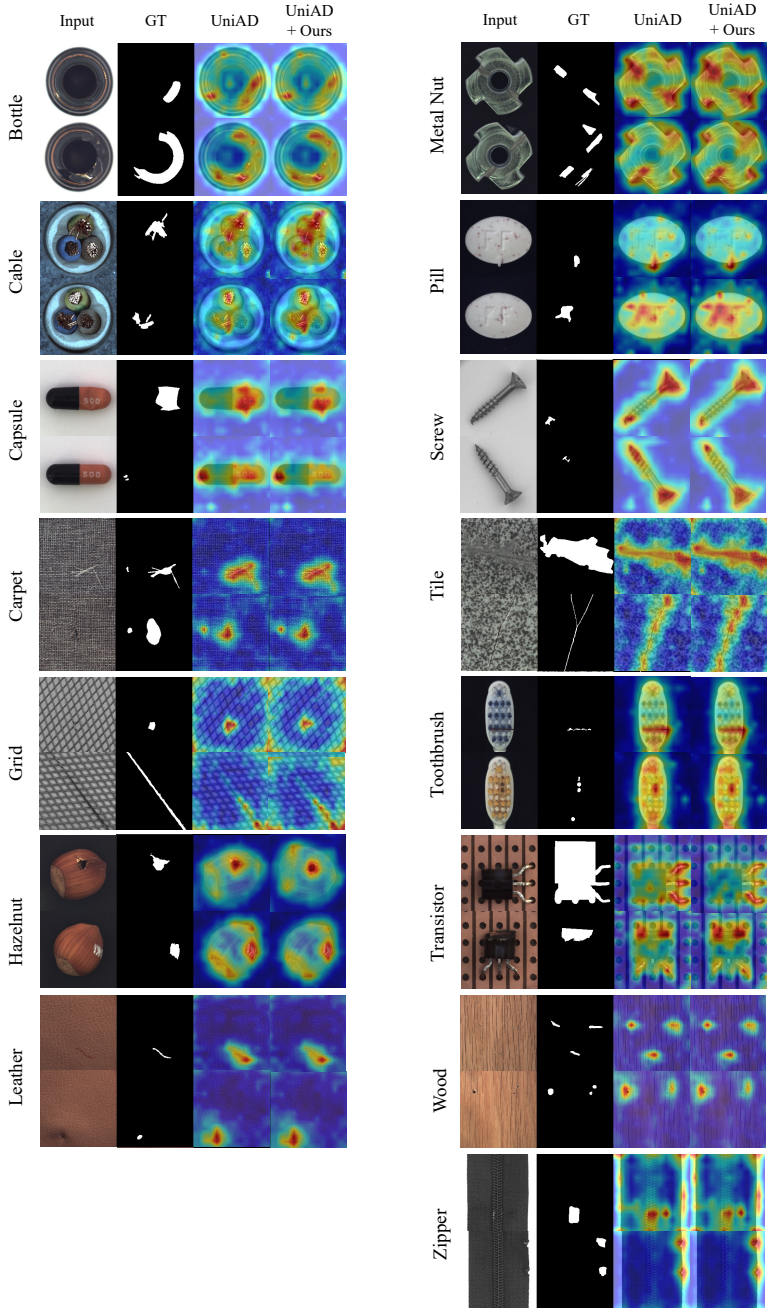


Figure 5: Qualitative evaluation of 4 shot between UniAD [14] and UniAD + Ours on MVTec dataset [10].

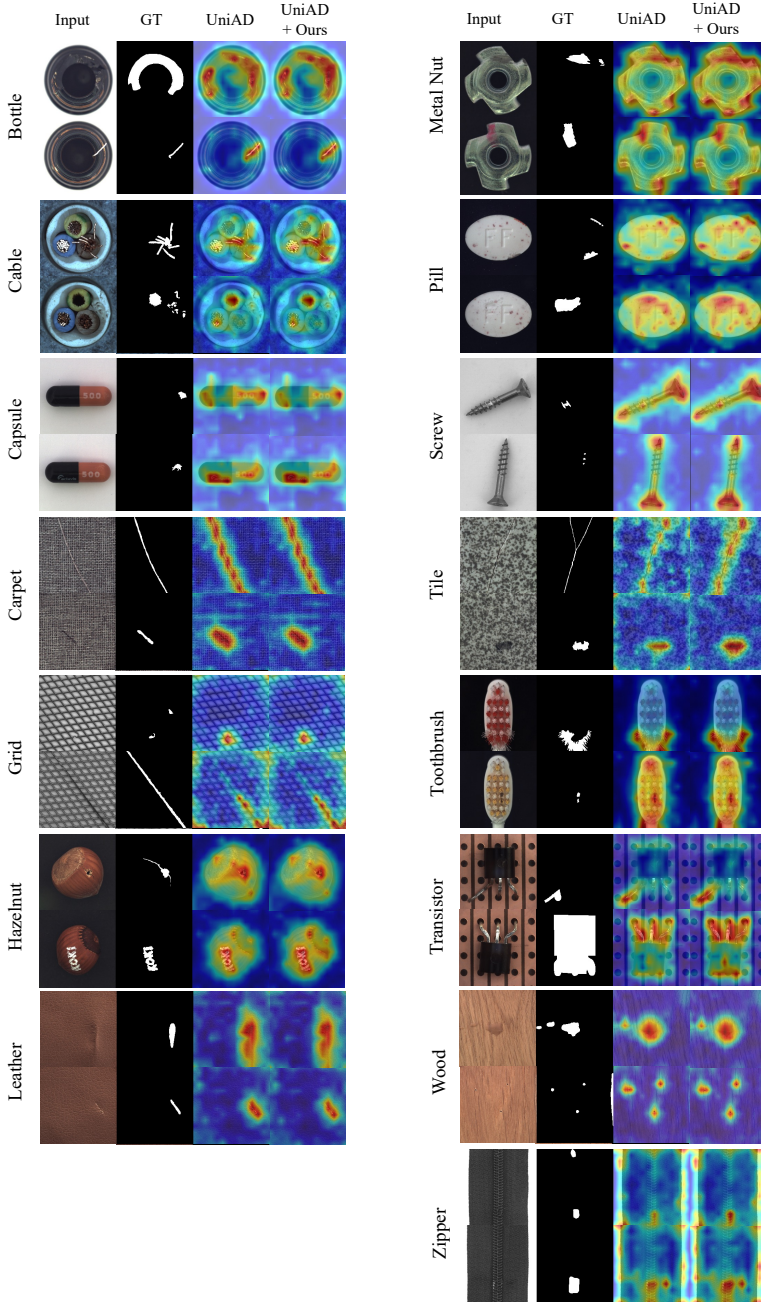


Figure 6: Qualitative evaluation of 8 shot between UniAD [1] and UniAD + Ours on MVTec dataset [1].

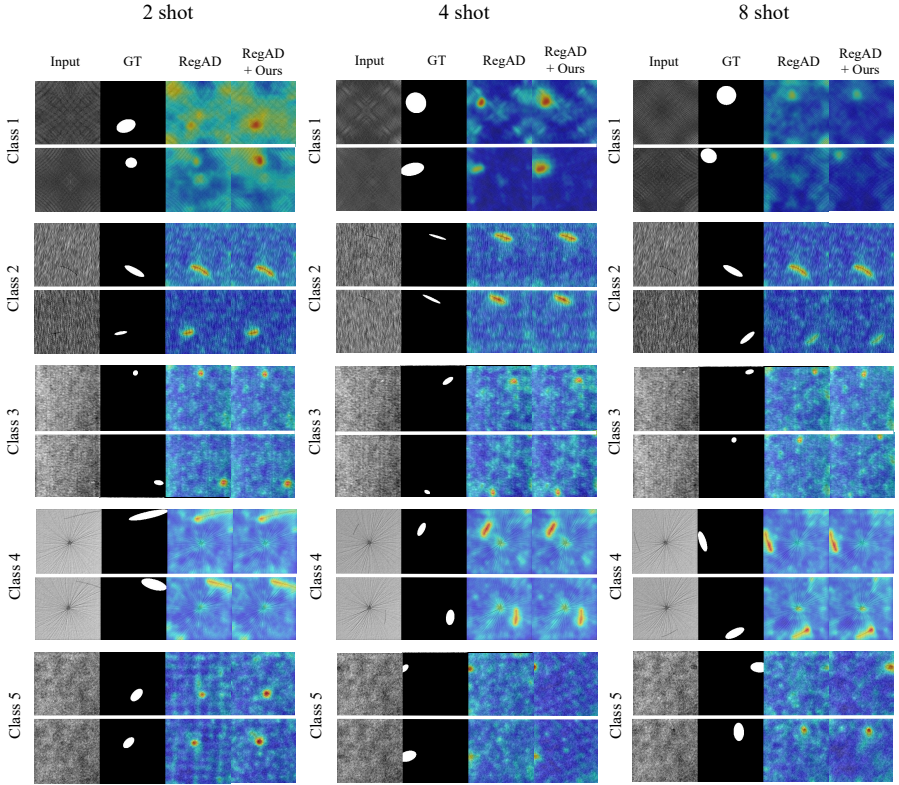


Figure 7: Qualitative evaluation of 2 shot between RegAD [1] and RegAD + Ours on DAGM 2007 dataset [2].

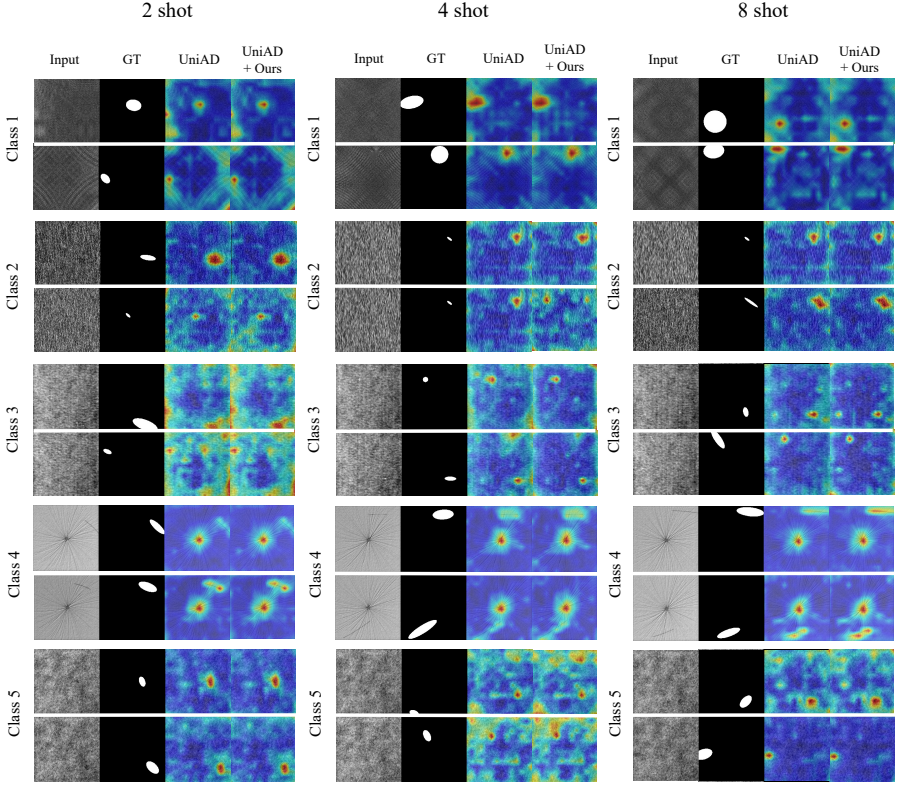


Figure 8: Qualitative evaluation between UniAD [9] and UniAD + Ours on DAGM 2007 dataset [9].