

**Supplementary Materials for
Real-IAD: A Real-World Multi-View Dataset for Benchmarking Versatile
Industrial Anomaly Detection**

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Website: <https://realiad4ad.github.io/Real-IAD>

In this supplementary material, we first give all 30 object visualizations including 12 complex products (mixed material and surfaces with complex geometries) and 18 simple products (single material, e.g., metal, plastic, wood, ceramics and etc., and simple and smooth surfaces) in Real-IAD in Fig 2. Then, some representative anomaly images covering all 8 defects, i.e., pit, deformation, abrasion, scratch, damage, missing, foreign objects, and contamination, are shown in Fig 1. In our main paper, we only report averaged results for all methods, here complete experimental results of all categories with both UIAD and FUIAD settings are reported in Tabs. 1, 2, 3, 4, 5 and 6.



Figure 1. **Anomalies Visualization of Real-IAD.** Each row represents an anomaly class from different products and diverse locations. From top to bottom, they are pit, deformation, abrasion, scratch, damage, missing, foreign objects, and contamination, respectively.

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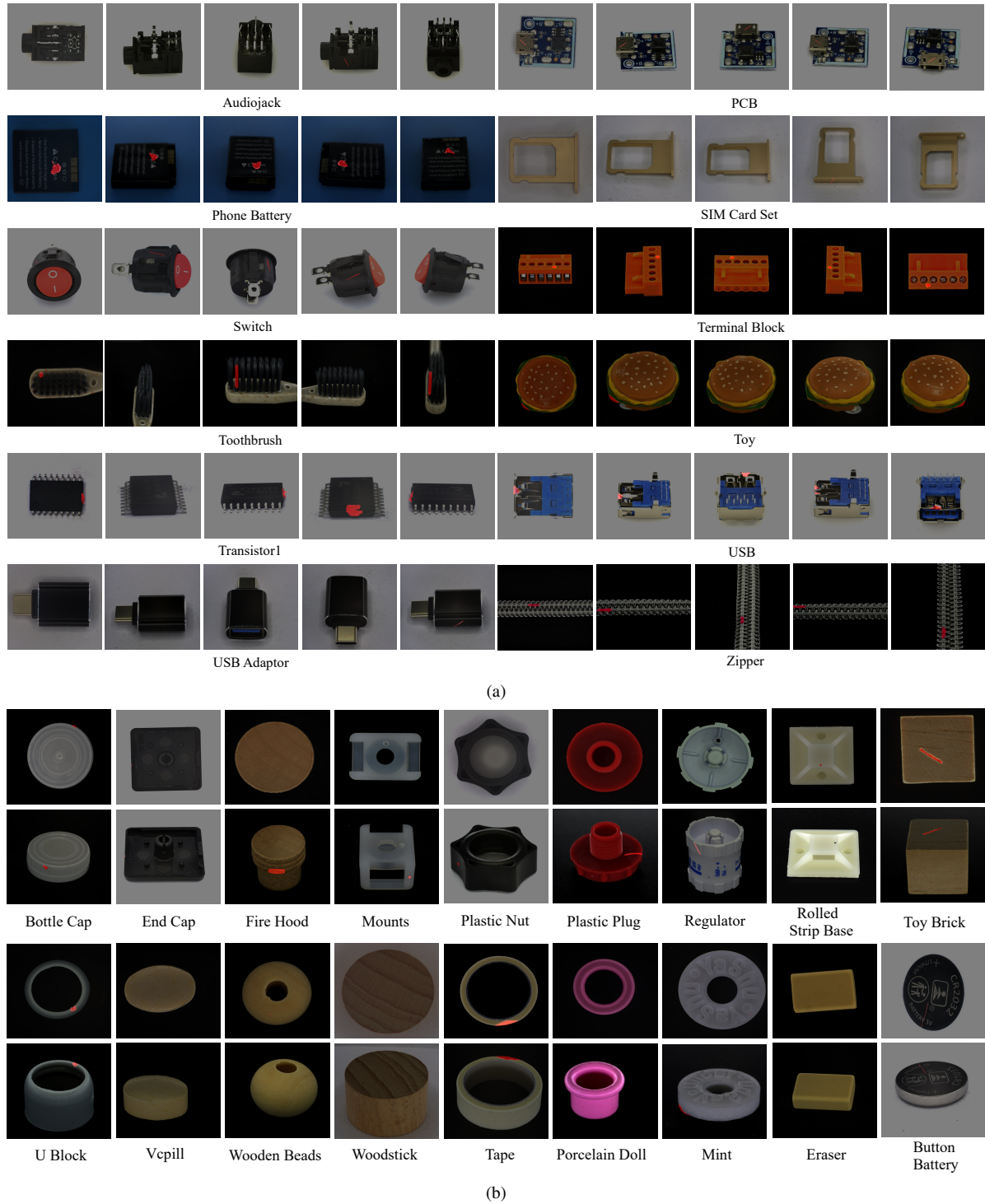


Figure 2. **Real-IAD Visualisation.** (a) The upper six rows show 12 complex objects and all 5 views of each object. (b) The bottom 4 rows show the remaining 18 simple objects and each object shows two views. All anomaly regions are marked in red. Best viewed in zoom and color.

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Table 1. UIAD performance (I-AUROC / P-AUROC) comparisons with state-of-the-art anomaly detection methods on single-view Real-IAD.

Category	Embedding-based				Data-Aug-based		Reconstruction-based	
	PaDim[1]	CFlow[3]	PatchCore[6]	SoftPatch[4]	SimpleNet[5]	DeSTSeg[8]	RD[2]	UniAD[7]
Audiojack	81.6 / 89.6	77.0 / 85.4	84.0 / 88.7	83.8 / 92.2	88.1 / 90.7	88.0 / 94.2	83.5 / 91.2	82.2 / 85.7
PCB	88.6 / 79.0	83.0 / 85.2	93.9 / 94.7	91.3 / 95.0	91.9 / 91.5	88.5 / 92.8	89.6 / 93.8	82.5 / 78.2
Phone Battery	87.6 / 85.4	85.3 / 89.7	91.9 / 91.2	90.4 / 79.3	92.7 / 75.9	92.6 / 94.5	90.4 / 94.7	84.5 / 85.1
SIM Card Set	94.8 / 95.2	97.1 / 94.7	98.5 / 97.2	96.2 / 88.7	98.6 / 86.4	95.0 / 94.3	91.9 / 97.3	94.6 / 91.5
Switch	89.1 / 92.8	86.4 / 85.6	91.4 / 93.7	95.7 / 96.4	97.3 / 95.5	95.6 / 97.4	91.8 / 93.7	85.0 / 90.8
Terminal Block	93.3 / 98.4	89.7 / 93.5	97.9 / 98.5	97.8 / 98.8	98.8 / 97.9	95.9 / 96.9	97.4 / 98.8	90.7 / 96.8
Toothbrush	87.9 / 92.2	87.9 / 90.1	90.0 / 95.2	88.5 / 86.9	90.6 / 82.1	92.3 / 88.1	85.6 / 95.3	89.4 / 88.3
Toy	94.1 / 83.0	90.5 / 77.9	89.2 / 90.1	91.4 / 92.4	91.1 / 87.3	85.2 / 83.8	86.6 / 93.9	74.5 / 79.8
Transistor1	90.2 / 91.4	86.9 / 90.2	95.9 / 97.0	95.0 / 97.2	97.6 / 96.2	96.6 / 92.5	93.5 / 96.5	90.9 / 89.7
USB	84.5 / 92.0	91.2 / 92.0	95.0 / 97.1	96.2 / 98.1	97.2 / 97.2	90.7 / 95.9	88.5 / 98.0	88.1 / 90.7
USB Adaptor	86.7 / 87.2	75.8 / 87.3	82.7 / 89.8	86.6 / 88.9	86.5 / 85.7	84.0 / 83.9	78.8 / 91.3	76.4 / 71.3
Zipper	94.4 / 90.2	95.6 / 93.4	98.8 / 96.1	98.1 / 95.4	99.6 / 94.5	99.9 / 95.8	99.6 / 98.1	95.4 / 94.0
Bottle Cap	89.2 / 94.7	88.9 / 91.7	92.2 / 94.9	95.2 / 96.2	95.0 / 95.4	87.3 / 93.2	90.5 / 92.6	87.4 / 89.5
End Cap	73.5 / 86.2	65.9 / 80.3	76.8 / 89.6	76.2 / 91.5	81.2 / 85.4	78.4 / 92.7	69.7 / 91.2	73.5 / 82.5
Fire Hood	92.2 / 94.9	92.0 / 95.5	93.4 / 94.0	93.4 / 93.8	94.9 / 92.8	85.5 / 93.3	92.5 / 96.9	93.1 / 93.5
Mounts	89.0 / 96.9	87.8 / 94.6	92.8 / 97.8	91.2 / 98.0	95.1 / 97.1	95.3 / 97.5	91.1 / 98.1	84.8 / 97.1
Plastic Nut	76.1 / 81.3	77.9 / 81.8	84.7 / 82.9	81.8 / 95.5	85.8 / 88.4	85.1 / 90.0	82.6 / 93.2	71.3 / 82.8
Plastic Plug	93.0 / 96.7	92.0 / 96.0	95.3 / 96.9	94.5 / 97.6	94.4 / 92.3	91.9 / 97.0	90.9 / 97.2	81.3 / 92.7
Regulator	83.1 / 98.5	71.1 / 82.0	96.7 / 99.6	89.5 / 99.2	97.9 / 98.3	98.1 / 97.9	87.8 / 98.9	53.8 / 74.2
Rolled Strip Base	99.1 / 95.4	98.3 / 98.1	99.3 / 98.5	98.9 / 98.9	99.8 / 97.1	99.2 / 88.6	94.9 / 96.1	97.7 / 97.6
Toy Brick	78.2 / 83.5	83.4 / 82.7	84.0 / 84.8	82.6 / 85.9	84.3 / 80.6	80.0 / 81.6	82.1 / 90.1	84.6 / 86.7
U Block	89.3 / 97.2	85.0 / 95.9	93.4 / 98.7	91.6 / 97.9	93.4 / 95.1	90.0 / 96.7	88.5 / 98.1	80.4 / 88.4
Vcpill	84.2 / 91.3	91.7 / 90.0	92.8 / 91.6	89.1 / 83.2	92.0 / 76.9	91.1 / 74.8	90.6 / 94.9	81.9 / 89.3
Wooden Beads	86.3 / 86.1	84.0 / 84.4	84.4 / 84.4	85.4 / 85.3	85.2 / 78.7	86.4 / 83.6	78.8 / 85.6	81.3 / 76.7
Woodstick	89.9 / 83.2	86.0 / 93.8	82.8 / 77.2	80.6 / 75.8	86.2 / 87.4	84.9 / 93.4	89.4 / 94.9	89.0 / 91.1
Tape	96.4 / 98.2	95.8 / 97.7	98.7 / 99.0	98.9 / 99.2	98.7 / 97.9	98.9 / 98.4	98.2 / 98.8	97.7 / 97.6
Porcelain Doll	79.3 / 88.9	84.3 / 93.4	88.6 / 96.0	85.8 / 94.7	87.0 / 88.2	83.3 / 75.7	87.5 / 95.4	66.9 / 84.7
Mint	57.6 / 66.6	57.8 / 62.0	69.5 / 72.4	63.7 / 70.1	69.4 / 61.6	64.1 / 66.1	63.6 / 78.3	56.7 / 44.0
Eraser	90.6 / 94.3	90.2 / 91.1	92.9 / 95.5	91.8 / 94.5	93.2 / 93.3	89.6 / 90.0	87.5 / 95.4	90.4 / 91.0
Button Battery	78.3 / 88.2	72.5 / 80.9	85.5 / 91.2	86.6 / 86.7	87.7 / 81.1	81.1 / 90.0	83.6 / 94.1	74.1 / 78.2
Average All	86.6 / 90.0	85.0 / 88.6	90.4 / 92.5	89.6 / 91.8	91.7 / 88.9	89.2 / 90.4	87.6 / 94.4	82.7 / 86.0

Top-view UAD

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Table 2. UIAD performance (S-AUROC / I-AUROC / P-AUPRO) comparisons with state-of-the-art anomaly detection methods on multi-view Real-IAD.

Category	Embedding-based				Data-Aug-based		Reconstruction-based	
	PaDim[1]	CFlow[3]	PatchCore[6]	SoftPatch[4]	SimpleNet[5]	DeSTSeg[8]	RD[2]	UniAD[7]
Audiojack	92.2 / 66.6 / 79.5	82.0 / 74.3 / 83.4	89.3 / 86.3 / 87.6	91.0 / 88.5 / 92.5	91.2 / 87.4 / 89.3	95.3 / 81.8 / 58.8	81.9 / 82.4 / 87.7	91.2 / 82.8 / 84.0
PCB	88.4 / 75.0 / 65.5	83.1 / 77.3 / 87.3	93.0 / 92.4 / 93.5	90.3 / 90.8 / 93.9	90.7 / 87.1 / 88.0	83.6 / 79.6 / 86.4	79.3 / 89.5 / 94.2	83.2 / 80.5 / 80.4
Phone Battery	91.7 / 81.9 / 83.3	91.2 / 84.4 / 92.0	95.1 / 91.6 / 91.6	91.5 / 90.2 / 83.3	94.7 / 88.9 / 72.8	98.2 / 86.2 / 77.9	89.4 / 90.8 / 95.8	93.6 / 83.4 / 87.3
SIM Card Set	94.2 / 91.8 / 84.1	95.6 / 94.4 / 92.2	99.3 / 97.1 / 87.7	98.4 / 95.8 / 75.9	99.2 / 96.1 / 72.8	98.3 / 91.8 / 91.8	89.9 / 93.6 / 92.7	94.0 / 91.1 / 83.4
Switch	82.1 / 80.8 / 88.8	92.9 / 83.9 / 87.5	94.6 / 89.4 / 93.6	97.8 / 94.7 / 96.2	98.8 / 94.8 / 93.8	96.6 / 92.5 / 94.3	87.3 / 87.2 / 93.7	95.3 / 85.7 / 90.7
Terminal Block	96.9 / 86.7 / 95.1	92.2 / 85.1 / 96.4	97.5 / 94.1 / 97.1	98.2 / 96.2 / 97.8	97.7 / 93.4 / 95.0	96.1 / 91.4 / 90.2	89.8 / 94.5 / 98.6	93.8 / 85.9 / 93.1
Toothbrush	91.7 / 74.4 / 75.2	91.9 / 79.9 / 85.8	94.7 / 88.0 / 91.9	92.9 / 89.3 / 87.4	95.3 / 86.1 / 76.6	97.9 / 87.5 / 87.0	86.7 / 83.4 / 90.9	95.0 / 82.7 / 86.6
Toy	91.4 / 82.5 / 72.4	78.8 / 67.8 / 81.2	92.8 / 87.3 / 91.2	91.3 / 86.7 / 91.9	92.9 / 82.2 / 77.5	96.5 / 82.1 / 78.5	75.0 / 81.5 / 92.4	77.2 / 67.3 / 74.4
Transistor1	90.3 / 86.5 / 88.3	96.6 / 92.8 / 94.8	99.8 / 97.8 / 97.5	99.3 / 97.2 / 97.6	99.7 / 97.3 / 95.5	99.0 / 95.6 / 96.4	94.7 / 95.8 / 97.6	99.3 / 94.1 / 92.9
USB	77.0 / 69.7 / 76.9	86.1 / 78.1 / 83.7	93.9 / 90.7 / 95.1	93.8 / 91.2 / 96.8	93.9 / 90.0 / 93.5	93.3 / 90.3 / 89.1	89.4 / 92.1 / 96.1	83.1 / 80.9 / 85.2
USB Adaptor	93.2 / 81.9 / 89.9	86.8 / 75.2 / 88.8	90.6 / 83.8 / 91.4	91.9 / 86.0 / 91.8	93.0 / 82.7 / 79.4	93.6 / 73.1 / 55.3	65.3 / 71.9 / 89.5	85.1 / 77.3 / 79.9
Zipper	99.3 / 90.4 / 78.5	97.6 / 93.8 / 94.2	100.0 / 98.1 / 90.8	99.6 / 97.9 / 90.9	99.7 / 98.2 / 92.4	99.7 / 98.4 / 99.0	96.1 / 97.8 / 98.0	98.8 / 98.2 / 94.7
Bottle Cap	98.1 / 87.7 / 91.9	98.8 / 91.3 / 95.4	99.4 / 94.3 / 93.0	99.1 / 95.9 / 96.8	99.4 / 91.6 / 88.2	92.4 / 87.1 / 83.4	93.7 / 89.2 / 97.0	97.3 / 89.8 / 93.8
End Cap	76.1 / 73.7 / 85.7	75.1 / 66.4 / 87.2	91.9 / 84.1 / 92.2	92.3 / 85.8 / 93.6	94.2 / 83.4 / 82.9	82.3 / 80.3 / 81.6	68.1 / 79.0 / 93.4	89.4 / 80.4 / 85.6
Fire Hood	96.9 / 77.3 / 72.7	87.0 / 80.5 / 93.5	89.3 / 84.1 / 88.6	87.8 / 84.3 / 89.2	95.6 / 81.8 / 82.7	96.9 / 78.9 / 62.7	81.4 / 84.3 / 91.7	83.0 / 79.5 / 84.5
Mounts	98.4 / 82.5 / 89.1	98.2 / 85.3 / 95.6	99.7 / 88.0 / 91.3	99.3 / 85.9 / 89.6	99.4 / 88.2 / 89.2	99.1 / 85.1 / 68.6	92.5 / 85.7 / 94.6	97.0 / 87.2 / 94.3
Plastic Nut	98.2 / 73.8 / 87.4	88.6 / 79.8 / 94.1	97.8 / 90.8 / 95.4	95.7 / 89.3 / 96.2	95.7 / 89.3 / 90.6	94.4 / 90.2 / 81.3	72.8 / 85.0 / 96.7	87.1 / 79.3 / 87.2
Plastic Plug	87.4 / 80.0 / 86.7	90.0 / 83.9 / 93.3	95.7 / 89.7 / 92.2	92.5 / 88.7 / 92.9	94.4 / 87.1 / 84.4	95.6 / 86.0 / 74.4	89.3 / 90.5 / 96.3	78.0 / 78.2 / 87.7
Regulator	96.5 / 76.5 / 85.1	85.1 / 62.9 / 85.0	86.0 / 81.9 / 95.7	82.9 / 82.1 / 95.1	92.0 / 82.2 / 88.7	93.0 / 89.8 / 79.9	92.5 / 87.3 / 97.0	55.5 / 51.8 / 70.3
Rolled Strip Base	98.6 / 97.4 / 96.1	98.8 / 97.1 / 98.4	99.7 / 98.9 / 98.3	99.7 / 99.1 / 99.0	99.6 / 99.4 / 95.7	98.9 / 98.3 / 98.5	80.3 / 94.3 / 98.5	99.3 / 98.6 / 97.7
Toy Brick	84.3 / 71.0 / 76.9	82.9 / 80.7 / 88.7	82.6 / 81.4 / 83.6	78.2 / 79.8 / 85.7	85.7 / 80.8 / 75.7	87.0 / 76.8 / 70.0	72.5 / 73.9 / 88.7	78.3 / 77.9 / 82.3
U Block	98.3 / 84.1 / 89.8	96.7 / 90.5 / 96.7	98.8 / 91.9 / 96.8	98.3 / 91.6 / 96.5	98.5 / 90.7 / 91.7	98.5 / 90.1 / 81.4	86.9 / 91.7 / 97.1	96.3 / 88.8 / 94.0
Vcpill	94.7 / 67.4 / 80.1	87.8 / 85.8 / 93.5	96.5 / 91.4 / 93.5	93.7 / 89.6 / 88.7	97.5 / 91.1 / 85.2	96.4 / 90.0 / 89.2	87.2 / 90.2 / 94.3	89.4 / 88.6 / 94.2
Wooden Beads	91.1 / 82.4 / 78.3	89.3 / 87.4 / 89.4	91.4 / 88.6 / 87.3	90.9 / 89.2 / 87.9	92.9 / 85.7 / 81.6	91.9 / 86.2 / 82.7	85.0 / 87.4 / 89.2	82.5 / 80.7 / 83.0
Woodstick	81.8 / 79.9 / 78.8	83.9 / 78.9 / 89.0	74.5 / 77.2 / 69.1	73.9 / 76.0 / 70.8	81.5 / 77.9 / 71.7	90.2 / 89.0 / 79.2	71.9 / 84.2 / 91.6	76.0 / 78.9 / 77.2
Tape	99.8 / 93.7 / 96.4	98.5 / 96.0 / 98.8	99.9 / 98.2 / 97.9	99.7 / 97.9 / 97.9	100.0 / 96.9 / 95.4	99.1 / 96.1 / 92.8	89.5 / 93.1 / 98.7	99.1 / 97.2 / 97.6
Porcelain Doll	93.8 / 74.3 / 75.2	95.1 / 76.0 / 95.4	96.1 / 88.2 / 94.3	94.7 / 86.1 / 93.4	96.2 / 86.1 / 86.0	94.6 / 83.7 / 68.7	89.6 / 87.8 / 95.1	92.8 / 84.1 / 91.7
Mint	69.1 / 66.9 / 61.4	79.1 / 70.7 / 75.1	85.7 / 76.2 / 81.4	82.1 / 74.5 / 80.8	86.8 / 77.2 / 66.0	77.7 / 70.5 / 71.2	67.7 / 71.6 / 79.9	73.0 / 67.6 / 60.2
Eraser	96.5 / 86.7 / 90.7	87.2 / 88.1 / 97.0	95.6 / 93.4 / 96.1	96.1 / 93.5 / 95.9	94.7 / 91.2 / 90.0	91.9 / 88.2 / 83.3	82.9 / 89.2 / 96.8	91.2 / 89.6 / 93.8
Button Battery	88.7 / 84.8 / 54.1	96.3 / 85.2 / 82.3	90.6 / 87.3 / 88.2	91.9 / 88.5 / 78.9	95.8 / 88.8 / 64.0	93.3 / 91.2 / 90.4	83.3 / 87.0 / 91.1	87.5 / 79.0 / 75.8
Average All	91.2 / 80.3 / 81.8	89.8 / 82.5 / 90.5	93.7 / 89.4 / 91.5	92.8 / 89.4 / 90.8	94.9 / 88.5 / 84.6	94.0 / 86.9 / 81.5	83.7 / 87.1 / 93.8	88.1 / 82.9 / 86.1

Table 3. FUIAD performance (S-AUROC / I-AUROC / P-AUPRO) comparisons with state-of-the-art anomaly detection methods on multi-view Real-IAD with a noisy ratio of 0.

Category	Embedding-based				Data-Aug-based		Reconstruction-based	
	PaDim[1]	CFlow[3]	PatchCore[6]	SoftPatch[4]	SimpleNet[5]	DeSTSeg[8]	RD[2]	UniAD[7]
Audiojack	96.0 / 74.1 / 83.5	80.4 / 78.0 / 87.1	93.0 / 89.0 / 89.7	93.0 / 90.4 / 92.9	94.7 / 90.4 / 89.7	96.7 / 85.4 / 88.6	84.6 / 86.6 / 90.9	95.0 / 87.1 / 86.6
PCB	92.0 / 79.8 / 70.0	81.7 / 78.3 / 87.0	94.4 / 94.1 / 94.1	94.4 / 94.2 / 95.7	93.9 / 89.4 / 90.3	94.0 / 92.9 / 91.9	94.3 / 94.0 / 94.2	87.8 / 85.8 / 84.1
Phone Battery	92.0 / 86.0 / 87.3	97.4 / 86.3 / 94.0	96.4 / 92.7 / 94.2	95.3 / 92.7 / 86.2	98.3 / 90.1 / 70.3	98.4 / 89.7 / 94.0	80.4 / 91.4 / 97.7	92.6 / 87.6 / 91.5
SIM Card Set	95.0 / 95.2 / 89.1	91.7 / 91.9 / 93.7	98.8 / 98.7 / 91.7	98.0 / 97.9 / 79.8	98.4 / 97.6 / 72.5	96.1 / 93.9 / 90.5	85.2 / 95.5 / 94.4	94.4 / 94.1 / 85.9
Switch	83.0 / 81.9 / 89.5	92.5 / 87.6 / 89.4	94.7 / 89.6 / 93.8	98.4 / 96.1 / 96.7	98.8 / 94.8 / 94.2	97.2 / 94.5 / 94.2	91.7 / 91.8 / 94.7	95.6 / 88.3 / 92.3
Terminal Block	95.6 / 91.6 / 95.8	92.6 / 89.0 / 95.9	97.1 / 95.2 / 97.3	97.6 / 96.4 / 97.8	96.5 / 94.1 / 95.1	97.3 / 94.9 / 96.9	85.0 / 94.6 / 98.6	96.0 / 89.6 / 94.1
Toothbrush	93.6 / 77.0 / 77.1	96.0 / 82.9 / 86.1	95.1 / 88.7 / 92.6	92.8 / 90.0 / 88.9	94.6 / 87.1 / 76.1	99.0 / 89.6 / 85.2	77.8 / 83.2 / 92.1	94.9 / 83.7 / 88.2
Toy	92.7 / 88.9 / 75.8	73.0 / 65.2 / 78.4	95.5 / 90.5 / 92.3	94.2 / 90.0 / 92.6	94.8 / 85.0 / 73.6	98.0 / 88.4 / 77.5	84.9 / 86.5 / 93.2	78.7 / 69.0 / 77.4
Transistor1	95.6 / 90.7 / 90.8	99.6 / 95.8 / 95.8	99.9 / 98.4 / 98.0	99.8 / 97.9 / 98.0	100.0 / 97.7 / 95.7	99.3 / 95.5 / 90.0	99.9 / 98.2 / 97.8	99.6 / 95.5 / 94.2
USB	80.5 / 74.4 / 82.5	79.4 / 78.2 / 87.9	95.4 / 93.9 / 96.4	94.2 / 94.0 / 98.1	94.3 / 94.1 / 94.6	93.9 / 92.8 / 93.9	85.7 / 93.2 / 97.4	84.2 / 84.4 / 88.4
USB Adaptor	92.7 / 85.8 / 91.7	87.4 / 76.0 / 89.3	90.1 / 84.2 / 92.0	92.6 / 88.6 / 92.3	90.9 / 84.5 / 79.5	93.6 / 82.9 / 85.7	75.1 / 75.7 / 90.6	86.8 / 81.3 / 84.1
Zipper	99.3 / 92.1 / 80.5	97.7 / 96.4 / 93.7	100.0 / 97.9 / 91.0	99.8 / 97.5 / 91.2	99.8 / 98.0 / 91.2	99.7 / 99.2 / 95.0	90.7 / 97.5 / 98.4	99.0 / 98.3 / 96.2
Bottle Cap	98.5 / 93.2 / 95.5	98.5 / 93.6 / 97.0	99.3 / 96.8 / 94.5	99.4 / 97.6 / 98.3	98.2 / 94.6 / 93.4	97.2 / 91.4 / 92.1	92.0 / 94.9 / 98.0	99.2 / 94.4 / 96.5
End Cap	79.1 / 74.6 / 85.7	79.3 / 68.1 / 85.3	94.4 / 85.8 / 92.4	95.1 / 87.8 / 93.9	95.9 / 84.3 / 76.2	88.2 / 83.7 / 81.4	66.1 / 76.1 / 93.7	91.1 / 80.7 / 84.3
Fire Hood	97.8 / 84.2 / 76.4	87.8 / 84.3 / 93.6	88.3 / 85.4 / 90.0	87.9 / 86.2 / 91.1	93.2 / 82.0 / 80.4	92.0 / 85.5 / 88.1	68.8 / 82.1 / 93.3	81.4 / 79.9 / 86.4
Mounts	99.4 / 87.2 / 88.2	98.6 / 88.8 / 95.7	100.0 / 91.1 / 90.1	100.0 / 90.0 / 87.9	99.5 / 89.6 / 89.4	99.7 / 87.3 / 87.4	86.7 / 88.8 / 94.4	97.8 / 89.5 / 93.5
Plastic Nut	98.8 / 79.3 / 89.4	89.7 / 82.1 / 92.9	98.9 / 94.7 / 96.1	96.6 / 93.6 / 96.9	96.3 / 93.0 / 90.2	93.7 / 92.7 / 96.4	93.2 / 92.5 / 96.9	89.0 / 82.7 / 89.4
Plastic Plug	85.7 / 85.9 / 87.5	82.7 / 81.4 / 94.1	93.4 / 92.9 / 94.0	91.1 / 91.6 / 94.7	95.4 / 90.6 / 84.1	93.4 / 90.7 / 92.9	91.7 / 93.7 / 96.3	83.4 / 83.5 / 87.9
Regulator	97.8 / 83.1 / 86.7	81.0 / 66.3 / 83.0	90.7 / 86.4 / 96.9	89.8 / 86.3 / 96.5	94.3 / 81.8 / 85.0	99.0 / 92.6 / 95.2	93.4 / 89.4 / 98.3	64.7 / 61.0 / 74.3
Rolled Strip Base	98.9 / 98.0 / 97.3	97.9 / 95.9 / 98.9	99.4 / 99.0 / 98.9	99.6 / 99.3 / 99.2	99.6 / 99.3 / 96.8	98.8 / 98.7 / 98.0	98.2 / 97.0 / 98.7	99.1 / 98.5 / 98.2
Toy Brick	88.3 / 73.2 / 77.0	81.6 / 79.3 / 88.1	87.1 / 83.5 / 84.8	82.9 / 81.1 / 87.0	82.6 / 74.9 / 66.4	73.9 / 69.4 / 60.1	78.3 / 78.7 / 89.0	81.2 / 77.6 / 82.5
U Block	98.0 / 88.2 / 92.1	95.6 / 91.8 / 95.5	98.2 / 93.7 / 97.0	97.4 / 93.2 / 96.8	97.7 / 93.1 / 92.5	98.7 / 89.3 / 93.6	85.8 / 92.6 / 98.1	95.1 / 91.2 / 94.0
Vcpill	93.9 / 73.4 / 82.6	87.7 / 88.1 / 94.0	96.0 / 92.4 / 94.6	94.2 / 90.5 / 90.5	97.8 / 91.6 / 85.9	97.0 / 89.1 / 81.5	96.0 / 89.9 / 95.7	86.5 / 87.7 / 93.9
Wooden Beads	92.7 / 89.8 / 84.8	89.9 / 90.9 / 90.8	89.4 / 89.7 / 89.2	89.2 / 90.1 / 89.9	90.0 / 87.1 / 82.7	88.7 / 88.2 / 88.2	83.6 / 88.9 / 91.6	81.9 / 81.6 / 85.6
Woodstick	83.7 / 82.9 / 79.8	80.2 / 80.8 / 88.7	75.5 / 81.1 / 71.0	74.8 / 80.6 / 73.3	79.7 / 82.1 / 71.6	89.1 / 88.9 / 90.3	61.9 / 84.4 / 92.8	79.1 / 82.9 / 78.4
Tape	99.8 / 95.7 / 96.9	96.8 / 94.7 / 99.3	99.7 / 98.8 / 98.0	99.6 / 98.5 / 98.0	99.9 / 97.6 / 96.3	99.7 / 96.4 / 98.3	97.2 / 98.2 / 99.3	99.6 / 98.2 / 98.6
Porcelain Doll	96.3 / 81.0 / 80.2	91.0 / 79.9 / 95.4	96.7 / 91.0 / 96.1	95.8 / 88.2 / 95.4	98.3 / 90.0 / 88.4	95.9 / 87.1 / 90.7	95.1 / 89.4 / 96.9	94.0 / 86.8 / 93.4
Mint	76.7 / 71.2 / 64.0	79.7 / 71.4 / 71.6	90.7 / 80.2 / 83.2	88.2 / 77.5 / 83.1	91.0 / 81.7 / 64.6	85.4 / 78.0 / 64.0	70.6 / 74.5 / 86.4	79.2 / 70.0 / 57.8
Eraser	96.8 / 90.7 / 94.2	86.0 / 89.2 / 98.2	95.4 / 94.9 / 98.1	95.0 / 95.3 / 97.7	93.5 / 92.0 / 86.4	94.5 / 91.2 / 93.4	89.4 / 92.7 / 97.8	90.4 / 91.6 / 94.8
Button Battery	90.6 / 89.2 / 59.1	90.2 / 84.0 / 78.6	87.9 / 87.5 / 90.0	90.3 / 89.2 / 82.3	90.4 / 86.0 / 62.7	89.0 / 87.2 / 85.4	82.7 / 86.8 / 91.9	92.1 / 80.7 / 76.0
Average All	92.7 / 84.6 / 84.4	88.8 / 83.9 / 90.6	94.4 / 91.3 / 92.6	93.9 / 91.4 / 92.1	94.9 / 89.8 / 83.9	94.6 / 89.6 / 88.7	85.5 / 89.3 / 95.0	89.6 / 85.4 / 87.6

FUIAD-NR-0.0

Table 4. FUIAD performance (S-AUROC / I-AUROC / P-AUPRO) comparisons with state-of-the-art anomaly detection methods on multi-view Real-IAD with a noisy ratio of 0.1.

Category	Embedding-based				Data-Aug-based		Reconstruction-based	
	PaDim[1]	CFlow[3]	PatchCore[6]	SoftPatch[4]	SimpleNet[5]	DeSTSeg[8]	RD[2]	UniAD[7]
Audiojack	89.2 / 74.3 / 86.1	75.8 / 71.8 / 86.9	88.2 / 87.1 / 89.6	88.0 / 88.7 / 93.1	84.0 / 84.1 / 85.1	88.8 / 87.6 / 90.6	71.6 / 85.8 / 91.3	88.5 / 85.2 / 85.8
PCB	84.8 / 76.0 / 71.7	79.9 / 74.8 / 86.6	93.9 / 93.5 / 94.3	91.9 / 93.3 / 95.9	84.3 / 83.0 / 87.1	87.5 / 85.7 / 87.8	90.6 / 91.3 / 94.1	85.2 / 83.5 / 83.9
Phone Battery	80.3 / 85.4 / 90.0	86.7 / 86.1 / 94.6	90.1 / 92.5 / 95.8	93.4 / 93.0 / 89.0	80.9 / 81.8 / 74.7	76.5 / 85.6 / 88.2	74.4 / 89.2 / 98.0	82.7 / 87.6 / 92.8
SIM Card Set	88.2 / 92.5 / 93.8	88.3 / 90.2 / 93.9	94.9 / 97.1 / 97.1	96.0 / 96.4 / 91.9	89.6 / 85.4 / 62.9	81.9 / 82.2 / 87.2	67.7 / 91.0 / 96.2	90.2 / 91.8 / 87.5
Switch	77.5 / 78.3 / 89.7	40.4 / 68.3 / 86.3	94.2 / 89.5 / 93.4	98.3 / 95.6 / 96.7	95.5 / 87.9 / 88.4	94.4 / 90.1 / 92.4	64.2 / 83.4 / 93.4	94.8 / 86.8 / 92.2
Terminal Block	94.2 / 91.9 / 97.3	89.5 / 86.8 / 96.3	96.8 / 95.5 / 98.2	97.5 / 97.0 / 98.4	97.4 / 90.2 / 93.5	96.8 / 93.2 / 97.2	93.4 / 96.4 / 99.0	95.4 / 89.2 / 95.0
Toothbrush	74.8 / 72.8 / 79.4	77.9 / 78.1 / 86.5	87.9 / 89.0 / 93.3	90.1 / 90.8 / 89.7	82.7 / 82.5 / 72.9	88.5 / 82.1 / 72.6	74.4 / 81.5 / 91.7	92.2 / 83.3 / 88.3
Toy	76.5 / 71.3 / 81.3	66.7 / 58.6 / 76.7	93.1 / 87.9 / 92.2	93.4 / 89.1 / 92.7	86.1 / 74.7 / 72.2	86.3 / 82.7 / 77.7	77.1 / 84.7 / 93.5	76.5 / 68.0 / 77.8
Transistor1	83.0 / 85.6 / 92.7	96.4 / 91.1 / 94.7	99.5 / 97.1 / 97.9	99.3 / 96.9 / 98.0	96.8 / 89.7 / 89.9	97.3 / 92.6 / 90.1	99.6 / 97.3 / 98.3	99.4 / 93.9 / 93.8
USB	67.8 / 68.6 / 82.3	76.3 / 76.1 / 86.5	93.3 / 92.6 / 96.5	93.8 / 94.0 / 98.0	89.6 / 85.7 / 90.7	92.8 / 89.8 / 93.4	93.5 / 94.5 / 97.3	80.5 / 80.7 / 88.1
USB Adaptor	88.6 / 83.9 / 92.6	79.4 / 71.1 / 89.8	87.8 / 79.4 / 92.8	92.6 / 88.1 / 93.2	87.8 / 81.1 / 83.7	87.7 / 80.5 / 88.1	81.2 / 77.5 / 91.8	85.2 / 79.0 / 83.7
Zipper	97.2 / 89.9 / 81.6	89.9 / 88.2 / 94.7	99.8 / 97.6 / 91.3	99.4 / 97.2 / 91.3	96.9 / 91.2 / 83.2	90.4 / 88.7 / 85.0	99.1 / 98.6 / 98.2	97.8 / 97.6 / 96.3
Bottle Cap	97.3 / 94.0 / 97.2	98.8 / 92.9 / 98.2	99.4 / 96.7 / 97.8	99.4 / 97.6 / 98.6	93.5 / 88.3 / 89.4	96.0 / 92.8 / 95.9	98.7 / 95.6 / 98.2	99.0 / 93.9 / 96.7
End Cap	73.3 / 71.9 / 85.4	71.0 / 67.1 / 83.1	92.7 / 83.5 / 91.8	95.0 / 87.6 / 93.6	88.3 / 74.7 / 69.1	81.5 / 78.2 / 87.9	63.7 / 79.1 / 93.3	88.8 / 79.0 / 83.8
Fire Hood	84.5 / 78.4 / 78.4	83.4 / 80.4 / 94.1	86.3 / 84.6 / 90.0	86.5 / 86.2 / 91.1	81.5 / 78.2 / 69.5	85.7 / 82.1 / 83.4	72.8 / 83.6 / 93.5	80.7 / 79.3 / 85.9
Mounts	97.7 / 87.8 / 89.2	96.5 / 88.8 / 95.6	99.8 / 93.1 / 90.2	100.0 / 90.6 / 88.7	92.6 / 83.8 / 86.3	97.6 / 87.6 / 89.4	81.7 / 90.3 / 93.6	97.5 / 89.9 / 94.3
Plastic Nut	84.1 / 80.7 / 91.1	84.3 / 82.0 / 94.1	97.9 / 93.5 / 96.1	96.2 / 93.7 / 96.9	87.7 / 85.2 / 76.8	91.1 / 90.3 / 95.2	90.8 / 89.9 / 97.2	87.5 / 80.7 / 90.0
Plastic Plug	81.6 / 85.0 / 89.4	89.9 / 87.7 / 93.6	92.3 / 93.0 / 96.0	90.5 / 92.2 / 95.8	89.8 / 84.9 / 78.1	92.1 / 86.7 / 86.5	92.4 / 93.3 / 96.7	79.3 / 81.5 / 88.2
Regulator	82.7 / 75.4 / 90.1	65.0 / 65.2 / 84.3	84.4 / 86.1 / 96.9	85.8 / 85.1 / 96.8	84.4 / 81.3 / 86.5	92.2 / 88.1 / 88.1	85.6 / 87.2 / 98.0	63.3 / 58.9 / 73.1
Rolled Strip Base	97.6 / 97.1 / 98.2	96.8 / 91.3 / 98.9	99.3 / 98.6 / 98.9	99.7 / 99.3 / 99.2	97.5 / 95.0 / 93.2	94.3 / 94.5 / 97.1	98.6 / 97.0 / 98.9	98.8 / 98.2 / 98.3
Toy Brick	85.0 / 71.7 / 78.8	72.7 / 72.6 / 89.0	84.2 / 81.6 / 85.2	81.6 / 81.0 / 87.3	72.6 / 66.7 / 56.7	84.7 / 76.5 / 76.5	73.0 / 72.7 / 88.3	80.0 / 76.8 / 83.1
U Block	95.8 / 88.8 / 94.7	91.2 / 89.3 / 96.8	96.4 / 94.8 / 97.7	97.0 / 94.1 / 97.3	89.3 / 88.4 / 88.1	82.5 / 82.3 / 92.6	94.1 / 93.6 / 98.3	94.2 / 90.5 / 93.6
Vcpill	85.4 / 71.1 / 83.9	82.5 / 84.3 / 93.7	94.5 / 92.0 / 94.6	93.3 / 89.9 / 90.5	89.6 / 85.3 / 78.5	90.8 / 85.6 / 82.2	90.1 / 76.1 / 94.9	82.2 / 86.3 / 93.9
Wooden Beads	89.4 / 88.6 / 87.5	89.1 / 89.9 / 91.1	85.0 / 87.9 / 89.5	88.6 / 89.2 / 90.1	83.6 / 82.4 / 77.9	82.5 / 81.4 / 76.3	57.4 / 82.8 / 91.8	79.2 / 79.6 / 84.9
Woodstick	79.1 / 82.1 / 79.8	73.2 / 73.6 / 89.4	73.9 / 80.8 / 70.8	74.3 / 79.9 / 72.4	74.6 / 74.4 / 71.3	82.4 / 87.5 / 88.4	81.6 / 88.7 / 93.8	76.9 / 81.9 / 78.3
Tape	97.3 / 96.7 / 97.4	96.5 / 96.7 / 99.2	98.6 / 98.3 / 98.1	99.5 / 98.7 / 98.0	93.7 / 91.5 / 89.5	89.9 / 93.8 / 97.9	97.0 / 98.2 / 99.4	99.2 / 97.9 / 98.6
Porcelain Doll	90.6 / 80.5 / 83.7	81.5 / 76.9 / 95.9	95.9 / 90.7 / 96.7	94.8 / 88.5 / 96.1	94.0 / 87.1 / 89.1	89.2 / 83.2 / 86.0	94.0 / 90.4 / 97.7	92.5 / 86.3 / 93.5
Mint	72.7 / 69.9 / 64.8	80.2 / 71.0 / 73.9	88.9 / 79.4 / 83.5	87.6 / 75.9 / 84.0	86.9 / 75.8 / 63.6	81.1 / 73.3 / 61.7	87.1 / 76.9 / 87.6	79.2 / 70.3 / 58.6
Eraser	93.6 / 90.3 / 96.0	87.0 / 91.1 / 98.0	93.9 / 94.5 / 98.4	94.8 / 94.8 / 97.8	84.3 / 86.7 / 83.8	87.3 / 89.0 / 92.9	75.5 / 90.1 / 97.7	89.6 / 92.0 / 94.7
Button Battery	75.8 / 75.7 / 67.4	66.7 / 68.4 / 78.4	83.1 / 83.8 / 90.1	85.1 / 84.2 / 86.4	78.5 / 72.9 / 63.8	73.8 / 74.6 / 79.8	84.0 / 84.9 / 91.7	80.3 / 75.2 / 75.5
Average All	85.5 / 81.9 / 86.4	81.8 / 80.3 / 90.7	92.2 / 90.4 / 93.2	92.8 / 90.9 / 92.9	87.8 / 83.3 / 79.9	88.1 / 85.6 / 86.9	83.5 / 88.1 / 95.1	87.2 / 84.2 / 87.7

FUAD-NR-0.1

Table 5. FUIAD performance (S-AUROC / I-AUROC / P-AUPRO) comparisons with state-of-the-art anomaly detection methods on multi-view Real-IAD with a noisy ratio of 0.2.

Category	Embedding-based				Data-Aug-based		Reconstruction-based	
	PaDim[1]	CFlow[3]	PatchCore[6]	SoftPatch[4]	SimpleNet[5]	DeSTSeg[8]	RD[2]	UniAD[7]
Audiojack	86.6 / 73.8 / 86.8	66.6 / 67.5 / 87.2	84.8 / 85.9 / 88.8	86.8 / 87.6 / 92.8	76.7 / 80.8 / 81.4	80.1 / 84.1 / 87.6	78.3 / 85.3 / 90.9	81.4 / 83.6 / 85.1
PCB	81.7 / 72.4 / 72.0	77.6 / 72.5 / 84.0	92.3 / 92.5 / 94.3	91.6 / 92.9 / 95.7	82.0 / 80.4 / 84.8	76.9 / 80.1 / 94.5	83.6 / 89.0 / 94.4	83.6 / 81.9 / 83.8
Phone Battery	75.9 / 83.5 / 89.7	82.6 / 81.3 / 93.8	84.7 / 91.0 / 95.9	92.6 / 92.1 / 88.8	77.9 / 79.4 / 69.2	80.1 / 86.7 / 90.5	78.1 / 88.9 / 98.0	78.6 / 85.8 / 92.6
SIM Card Set	85.8 / 91.0 / 94.2	88.9 / 91.3 / 94.2	94.5 / 96.8 / 97.2	95.6 / 95.7 / 91.4	88.1 / 84.5 / 57.9	70.9 / 71.6 / 78.2	78.9 / 93.6 / 96.6	87.0 / 90.0 / 87.3
Switch	75.0 / 75.5 / 89.2	77.2 / 74.4 / 87.0	93.3 / 89.0 / 93.3	98.2 / 95.4 / 96.6	92.2 / 85.1 / 86.7	92.7 / 84.2 / 79.5	67.0 / 81.8 / 93.2	94.0 / 85.5 / 91.8
Terminal Block	92.9 / 90.7 / 97.5	86.5 / 83.8 / 96.0	96.8 / 95.2 / 98.3	98.0 / 97.0 / 98.5	90.7 / 85.1 / 88.8	89.1 / 86.6 / 97.4	94.7 / 96.4 / 99.1	95.4 / 89.1 / 95.4
Toothbrush	69.3 / 69.8 / 79.0	83.4 / 77.9 / 87.1	86.6 / 87.5 / 93.2	88.9 / 89.5 / 89.5	75.2 / 71.6 / 63.6	84.1 / 72.8 / 65.0	78.9 / 82.3 / 91.1	89.3 / 81.7 / 88.2
Toy	70.6 / 65.9 / 81.6	64.3 / 58.9 / 78.5	91.5 / 86.0 / 91.5	93.0 / 88.0 / 92.5	78.8 / 69.7 / 69.2	85.3 / 77.8 / 76.1	76.6 / 84.0 / 93.1	74.1 / 66.9 / 78.0
Transistor1	76.7 / 82.1 / 92.6	96.6 / 91.4 / 95.2	99.1 / 96.5 / 97.8	97.7 / 95.6 / 97.6	90.8 / 82.3 / 81.9	93.1 / 83.6 / 74.4	99.2 / 95.9 / 98.0	99.1 / 92.7 / 93.7
USB	62.4 / 66.2 / 82.0	77.2 / 77.6 / 87.5	92.2 / 92.1 / 96.5	93.8 / 93.6 / 98.0	81.7 / 82.3 / 86.9	82.7 / 84.8 / 89.6	93.3 / 94.3 / 97.0	80.4 / 80.9 / 87.7
USB Adaptor	85.8 / 81.9 / 92.5	76.0 / 73.2 / 88.8	85.7 / 76.8 / 92.7	91.5 / 88.0 / 93.1	70.8 / 70.5 / 73.4	85.9 / 80.4 / 89.8	55.3 / 70.7 / 90.3	83.0 / 76.7 / 81.5
Zipper	95.2 / 88.1 / 80.9	88.4 / 85.3 / 95.3	99.6 / 97.3 / 91.4	99.0 / 96.9 / 91.4	91.0 / 86.0 / 74.6	88.1 / 84.6 / 76.8	76.5 / 92.3 / 98.1	97.0 / 96.9 / 96.2
Bottle Cap	96.7 / 93.3 / 97.3	96.3 / 93.0 / 98.0	98.9 / 96.6 / 98.0	99.3 / 97.7 / 98.7	87.4 / 84.5 / 86.2	91.2 / 91.9 / 97.0	92.1 / 93.5 / 98.4	98.0 / 93.6 / 96.7
End Cap	69.4 / 69.9 / 84.7	70.4 / 68.2 / 82.4	90.3 / 82.0 / 91.5	93.7 / 86.3 / 93.4	80.0 / 72.4 / 62.5	80.7 / 79.0 / 84.3	68.2 / 76.2 / 93.6	86.9 / 77.8 / 83.1
Fire Hood	80.3 / 76.6 / 78.7	85.0 / 84.2 / 95.0	83.8 / 83.8 / 89.8	85.2 / 85.6 / 91.0	75.0 / 76.9 / 76.9	86.8 / 81.6 / 85.3	73.0 / 82.6 / 93.1	79.9 / 78.9 / 85.9
Mounts	96.0 / 88.1 / 89.6	97.8 / 89.6 / 95.6	99.0 / 93.0 / 88.2	100.0 / 92.2 / 88.7	92.1 / 83.1 / 82.3	85.2 / 78.9 / 81.6	89.2 / 90.2 / 93.6	96.5 / 90.4 / 94.2
Plastic Nut	80.0 / 79.5 / 91.5	85.4 / 83.3 / 93.5	97.4 / 93.3 / 96.2	95.5 / 93.1 / 97.0	87.4 / 81.1 / 79.0	81.3 / 83.5 / 89.3	74.7 / 87.0 / 96.8	82.8 / 77.2 / 89.0
Plastic Plug	79.5 / 83.7 / 89.8	69.4 / 75.3 / 94.4	91.8 / 92.6 / 96.5	89.9 / 92.1 / 96.0	85.7 / 83.0 / 74.2	84.8 / 81.4 / 70.4	74.1 / 89.7 / 96.8	78.1 / 78.9 / 87.4
Regulator	78.5 / 73.5 / 90.5	70.9 / 67.6 / 85.9	85.0 / 85.1 / 97.2	85.1 / 85.4 / 97.1	80.3 / 74.3 / 81.0	87.9 / 84.0 / 84.8	82.9 / 86.8 / 98.1	58.9 / 58.3 / 73.5
Rolled Strip Base	96.4 / 96.2 / 98.1	94.2 / 90.1 / 98.9	98.6 / 97.6 / 98.8	99.5 / 98.8 / 99.1	96.2 / 91.5 / 86.7	87.4 / 89.4 / 94.3	93.7 / 93.7 / 99.0	98.7 / 97.9 / 98.3
Toy Brick	82.9 / 70.4 / 78.7	76.6 / 76.1 / 88.6	83.4 / 80.1 / 85.0	80.8 / 80.5 / 87.1	67.6 / 65.7 / 58.7	64.1 / 64.9 / 70.8	84.1 / 78.5 / 88.5	76.7 / 75.4 / 81.8
U Block	94.5 / 87.9 / 95.0	87.5 / 88.3 / 96.0	95.8 / 94.7 / 97.8	96.5 / 94.0 / 97.6	84.0 / 83.2 / 78.6	82.9 / 80.5 / 89.6	94.6 / 93.5 / 98.3	93.7 / 89.9 / 93.4
Vcpill	77.5 / 68.3 / 83.9	83.1 / 84.9 / 94.7	93.3 / 90.9 / 94.4	92.8 / 89.4 / 90.5	83.8 / 82.7 / 78.1	86.6 / 81.4 / 75.6	81.8 / 91.3 / 96.0	81.4 / 86.7 / 94.0
Wooden Beads	85.7 / 87.2 / 88.4	85.7 / 84.3 / 92.1	84.0 / 87.4 / 89.3	85.0 / 88.5 / 90.0	81.5 / 80.7 / 76.8	77.1 / 78.0 / 79.8	84.5 / 87.4 / 91.6	79.1 / 79.0 / 84.1
Woodstick	77.4 / 80.8 / 79.3	67.7 / 74.9 / 87.0	73.2 / 79.2 / 69.7	75.4 / 80.1 / 72.7	72.8 / 75.2 / 69.6	79.7 / 85.7 / 92.7	63.1 / 83.8 / 92.5	77.6 / 80.7 / 77.3
Tape	96.7 / 96.2 / 97.3	98.0 / 95.6 / 99.3	98.4 / 97.9 / 98.0	99.7 / 98.6 / 98.0	86.4 / 89.3 / 86.9	83.0 / 89.8 / 94.8	94.0 / 97.4 / 99.3	98.9 / 97.8 / 98.6
Porcelain Doll	85.6 / 79.7 / 84.1	75.5 / 76.8 / 96.1	95.6 / 90.3 / 96.6	95.0 / 87.9 / 96.2	83.3 / 81.2 / 78.1	85.6 / 83.2 / 92.8	91.2 / 89.6 / 97.7	91.5 / 86.2 / 93.4
Mint	69.8 / 68.9 / 65.0	79.4 / 68.1 / 72.8	88.4 / 78.3 / 82.9	87.2 / 75.5 / 84.2	81.0 / 71.7 / 52.9	52.0 / 54.7 / 43.7	68.0 / 72.7 / 86.0	72.0 / 64.7 / 57.2
Eraser	93.0 / 90.1 / 96.6	78.4 / 83.9 / 98.0	92.5 / 94.4 / 98.4	94.5 / 94.1 / 97.8	84.2 / 84.6 / 87.9	82.5 / 85.3 / 85.0	76.3 / 90.0 / 97.7	86.9 / 91.0 / 94.7
Button Battery	68.7 / 71.5 / 68.7	73.2 / 67.1 / 77.9	81.8 / 82.6 / 89.5	84.1 / 82.9 / 86.0	77.8 / 69.7 / 62.7	54.2 / 58.4 / 86.1	74.6 / 80.5 / 90.8	75.4 / 67.2 / 74.8
Average All	82.2 / 80.1 / 86.5	81.3 / 79.6 / 90.7	91.1 / 89.5 / 93.0	92.2 / 90.5 / 92.9	82.7 / 79.6 / 75.9	81.4 / 80.3 / 83.2	80.7 / 87.3 / 94.9	85.2 / 82.8 / 87.3

FUAD-NR-0.2

Table 6. FUIAD performance (S-AUROC / I-AUROC / P-AUPRO) comparisons with state-of-the-art anomaly detection methods on multi-view Real-IAD with a noisy ratio of 0.4.

Category	Embedding-based				Data-Aug-based		Reconstruction-based	
	PaDim[1]	CFlow[3]	PatchCore[6]	SoftPatch[4]	SimpleNet[5]	DeSTSeg[8]	RD[2]	UniAD[7]
Audiojack	80.5 / 70.7 / 86.8	66.2 / 73.3 / 85.5	79.7 / 82.8 / 88.3	80.4 / 85.2 / 92.7	73.1 / 73.3 / 82.9	76.9 / 83.4 / 74.8	56.4 / 77.3 / 90.4	78.1 / 80.4 / 84.5
PCB	74.0 / 66.7 / 71.4	70.1 / 70.6 / 86.3	90.7 / 91.2 / 93.9	91.1 / 91.4 / 95.6	80.8 / 76.0 / 84.3	73.2 / 72.5 / 82.1	87.0 / 89.1 / 94.1	77.3 / 75.7 / 82.3
Phone Battery	69.4 / 80.5 / 89.1	73.5 / 78.9 / 94.0	80.2 / 88.4 / 95.1	87.9 / 91.0 / 88.7	67.2 / 73.5 / 55.3	62.0 / 78.3 / 83.0	70.7 / 86.8 / 97.7	72.0 / 82.0 / 91.6
SIM Card Set	78.7 / 87.2 / 93.9	86.5 / 88.0 / 94.1	92.8 / 96.1 / 97.4	94.3 / 95.0 / 90.9	82.2 / 74.9 / 52.4	78.3 / 80.2 / 86.6	42.2 / 83.9 / 96.7	80.7 / 84.7 / 86.4
Switch	68.0 / 70.2 / 87.9	62.4 / 68.6 / 86.3	89.7 / 87.1 / 91.3	97.8 / 94.8 / 95.1	80.6 / 76.3 / 75.5	89.6 / 85.0 / 84.8	73.9 / 71.8 / 90.6	88.8 / 82.6 / 90.8
Terminal Block	88.0 / 88.2 / 97.7	79.7 / 77.5 / 95.3	95.3 / 94.1 / 98.4	97.2 / 96.8 / 98.6	83.8 / 79.2 / 84.1	44.7 / 71.9 / 92.9	84.8 / 92.6 / 99.1	91.5 / 87.2 / 95.2
Toothbrush	63.2 / 66.3 / 78.2	67.3 / 66.9 / 86.2	84.9 / 85.6 / 92.8	87.3 / 87.6 / 89.2	67.7 / 66.1 / 56.4	43.8 / 59.5 / 69.6	81.3 / 81.3 / 91.0	82.3 / 76.9 / 87.0
Toy	63.1 / 58.7 / 80.6	55.3 / 52.9 / 75.3	90.2 / 83.5 / 91.2	91.1 / 86.5 / 92.1	75.8 / 65.1 / 58.6	77.3 / 68.3 / 75.5	64.8 / 76.2 / 92.3	60.9 / 58.8 / 74.8
Transistor1	66.2 / 76.0 / 91.6	91.5 / 87.0 / 94.7	98.5 / 94.5 / 97.4	95.8 / 92.8 / 96.5	83.2 / 76.1 / 79.4	70.4 / 68.9 / 47.2	95.4 / 92.9 / 97.8	96.0 / 87.9 / 92.7
USB	50.4 / 59.9 / 80.1	75.1 / 73.7 / 83.6	88.6 / 89.9 / 95.3	93.2 / 93.3 / 97.8	73.9 / 78.2 / 81.7	84.3 / 83.1 / 84.5	77.0 / 89.4 / 96.4	77.9 / 76.9 / 87.2
USB Adaptor	82.9 / 79.7 / 92.1	72.7 / 66.9 / 88.7	82.9 / 74.4 / 92.0	90.3 / 85.1 / 92.9	69.3 / 67.7 / 61.7	81.1 / 71.5 / 82.3	79.8 / 73.1 / 91.1	75.4 / 71.0 / 79.6
Zipper	91.9 / 85.6 / 80.0	85.5 / 81.7 / 94.7	98.9 / 96.6 / 91.2	98.1 / 96.3 / 91.1	90.2 / 84.6 / 77.6	81.5 / 78.4 / 68.8	97.0 / 96.7 / 98.0	96.0 / 94.9 / 95.5
Bottle Cap	94.9 / 90.9 / 97.1	89.8 / 85.5 / 97.9	97.8 / 95.5 / 98.0	98.7 / 97.4 / 98.7	87.8 / 79.0 / 81.6	83.2 / 79.3 / 75.5	84.4 / 92.2 / 98.3	97.5 / 92.6 / 96.8
End Cap	63.9 / 67.3 / 84.0	78.8 / 71.5 / 83.5	87.6 / 79.8 / 91.0	90.0 / 84.5 / 92.2	72.2 / 68.3 / 58.0	78.2 / 76.8 / 70.2	81.1 / 77.0 / 92.8	84.4 / 76.2 / 83.3
Fire Hood	74.7 / 74.9 / 78.4	84.9 / 82.7 / 94.4	81.0 / 83.0 / 89.6	83.7 / 84.9 / 91.0	77.1 / 73.5 / 70.6	82.8 / 79.0 / 80.7	48.4 / 78.0 / 93.1	78.5 / 77.9 / 85.8
Mounts	93.8 / 86.9 / 90.0	96.2 / 88.7 / 96.3	98.2 / 92.6 / 85.8	98.3 / 91.9 / 89.4	82.1 / 79.1 / 69.7	83.2 / 76.3 / 72.3	62.0 / 75.8 / 94.3	94.0 / 90.5 / 94.2
Plastic Nut	71.7 / 77.1 / 91.5	78.2 / 82.2 / 94.2	95.8 / 92.6 / 96.0	94.6 / 91.6 / 96.9	74.9 / 77.8 / 69.9	76.7 / 75.2 / 61.4	86.3 / 88.6 / 96.6	79.5 / 74.5 / 88.2
Plastic Plug	77.5 / 82.0 / 90.1	87.1 / 86.3 / 94.2	89.6 / 92.2 / 96.6	89.2 / 91.7 / 95.8	85.3 / 79.9 / 70.0	85.2 / 82.3 / 83.3	83.1 / 89.7 / 96.7	72.7 / 75.2 / 87.3
Regulator	72.6 / 70.6 / 90.4	67.9 / 63.1 / 82.1	82.6 / 84.3 / 96.7	83.7 / 84.9 / 96.8	73.2 / 71.5 / 78.3	82.6 / 80.7 / 86.5	74.8 / 83.8 / 97.8	59.5 / 57.1 / 72.7
Rolled Strip Base	94.4 / 94.4 / 98.0	91.6 / 91.1 / 98.8	97.3 / 95.8 / 98.7	98.3 / 96.6 / 98.8	91.2 / 83.7 / 66.4	81.7 / 80.2 / 86.3	88.7 / 91.0 / 98.6	98.0 / 96.5 / 98.2
Toy Brick	78.4 / 68.3 / 78.2	76.0 / 75.9 / 87.1	80.2 / 78.1 / 84.3	80.4 / 78.0 / 86.4	66.6 / 63.8 / 65.7	63.1 / 60.8 / 62.3	81.7 / 78.9 / 88.5	73.9 / 73.1 / 80.9
U Block	91.7 / 87.2 / 95.2	90.0 / 89.3 / 96.5	94.8 / 94.5 / 97.8	95.8 / 93.4 / 97.5	77.0 / 78.5 / 73.9	80.3 / 81.5 / 87.0	91.9 / 93.0 / 98.2	90.5 / 88.1 / 93.0
Vcpill	63.7 / 64.8 / 83.3	79.9 / 84.1 / 93.8	90.3 / 89.4 / 93.9	90.2 / 88.6 / 90.0	82.6 / 77.8 / 71.2	66.8 / 68.6 / 61.2	69.1 / 84.5 / 94.2	73.4 / 83.5 / 93.2
Wooden Beads	81.6 / 84.7 / 88.5	84.6 / 86.2 / 92.7	81.5 / 85.9 / 88.8	82.7 / 87.6 / 89.2	75.9 / 77.3 / 72.3	57.1 / 51.2 / 66.1	73.8 / 82.2 / 91.2	73.9 / 75.4 / 84.0
Woodstick	73.6 / 79.0 / 78.7	67.9 / 73.6 / 87.1	70.8 / 78.1 / 68.3	74.7 / 79.7 / 71.8	69.8 / 71.0 / 67.2	76.8 / 79.0 / 73.3	46.1 / 79.9 / 92.6	76.1 / 79.4 / 77.6
Tape	95.5 / 95.4 / 97.3	96.3 / 95.9 / 99.3	98.0 / 97.7 / 98.0	99.2 / 97.9 / 97.9	82.6 / 83.4 / 80.6	85.8 / 74.8 / 88.9	98.3 / 97.8 / 99.3	97.0 / 97.0 / 98.4
Porcelain Doll	76.5 / 76.4 / 83.7	74.7 / 75.6 / 95.3	94.3 / 89.0 / 96.4	93.5 / 86.7 / 95.9	86.7 / 80.5 / 81.4	78.8 / 76.9 / 77.6	81.6 / 87.8 / 97.8	87.1 / 83.0 / 93.1
Mint	63.5 / 66.2 / 64.6	73.2 / 69.6 / 71.7	86.3 / 77.5 / 82.3	84.9 / 74.1 / 83.2	77.4 / 67.0 / 56.8	72.3 / 67.6 / 64.4	78.2 / 75.2 / 86.9	74.1 / 66.8 / 56.3
Eraser	89.3 / 88.8 / 96.9	87.4 / 89.4 / 97.7	89.9 / 92.8 / 98.3	93.6 / 94.0 / 97.7	72.7 / 77.2 / 75.9	73.9 / 77.7 / 80.3	83.4 / 89.7 / 97.8	85.4 / 89.6 / 94.3
Button Battery	59.9 / 64.3 / 68.9	67.5 / 64.0 / 79.8	79.7 / 79.9 / 88.3	82.7 / 80.7 / 85.0	68.3 / 62.3 / 56.2	64.4 / 62.2 / 56.2	79.7 / 80.0 / 90.4	72.8 / 66.5 / 73.9
Average All	76.4 / 77.0 / 86.1	78.6 / 78.0 / 90.2	88.9 / 88.1 / 92.4	90.6 / 89.3 / 92.5	77.7 / 74.7 / 70.5	74.5 / 74.4 / 75.5	76.8 / 84.5 / 94.7	81.5 / 80.1 / 86.6

FUIAD-NR-0.4