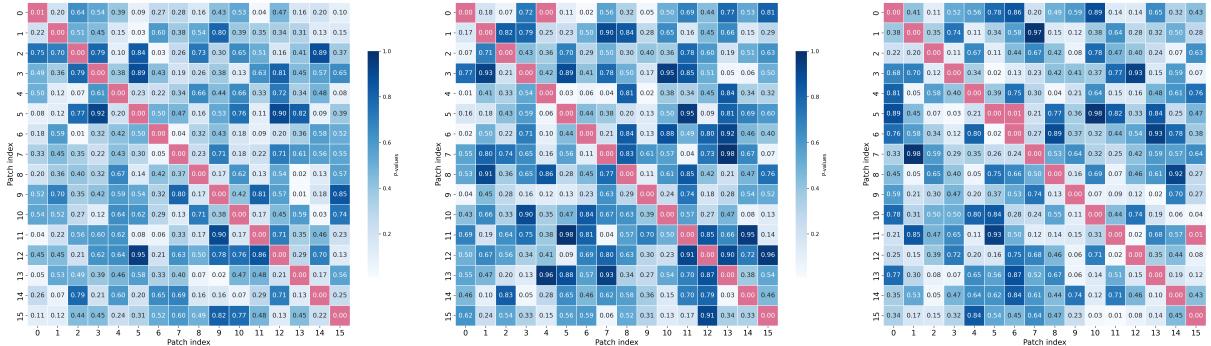
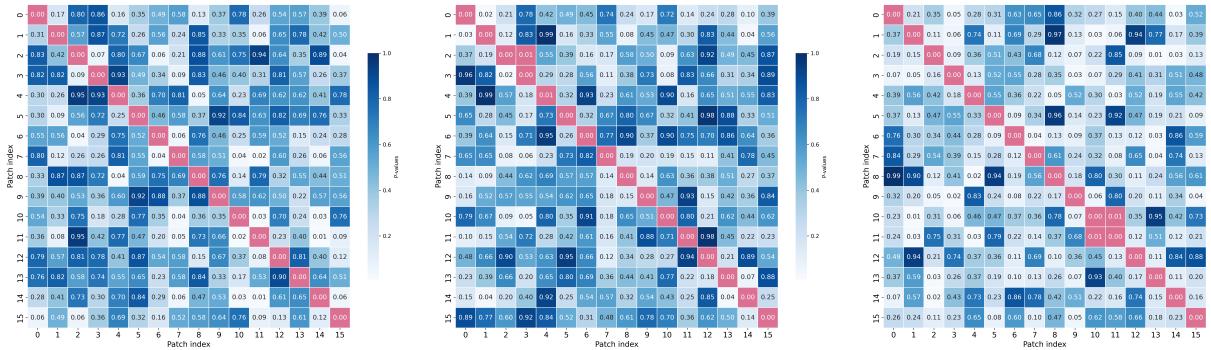


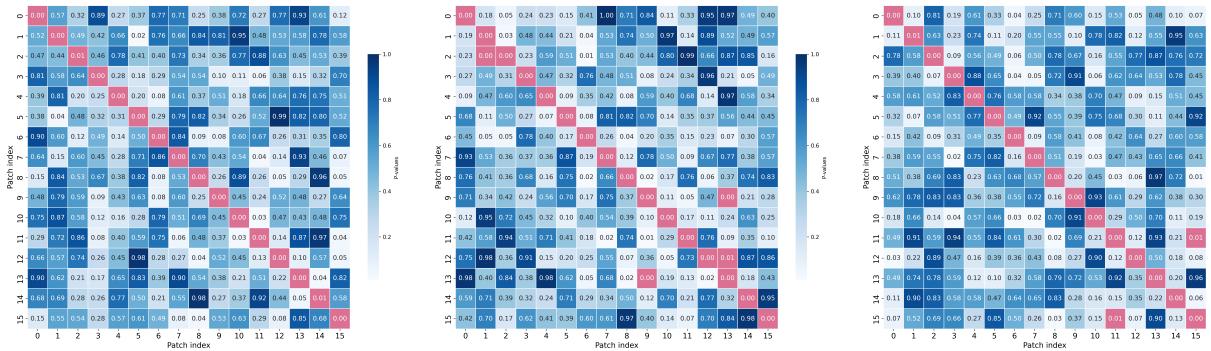
Hierarchical Martingale-based Testing Framework for Visual Anomaly Detection



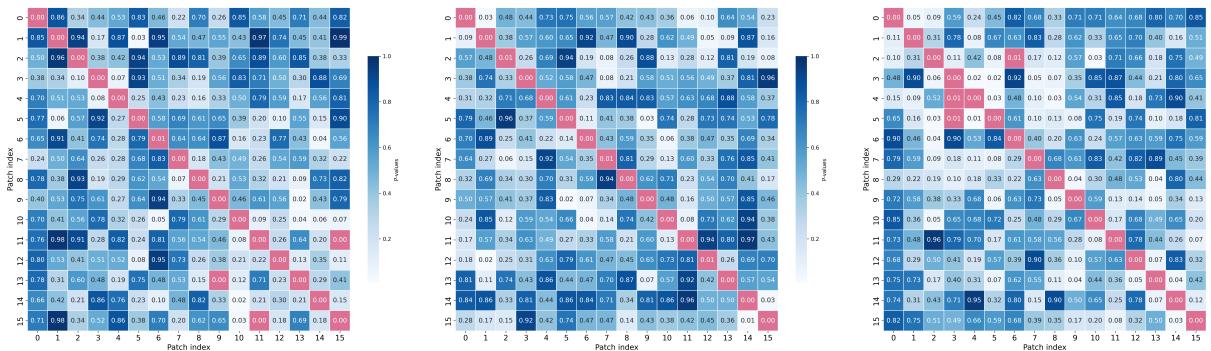
(a) CFA-Cable; CFA-Hazelnut; CFA-Leather (from left to right).



(b) CFLOW-Cable; CFLOW-Grid; CFLOW-Rough (from left to right).

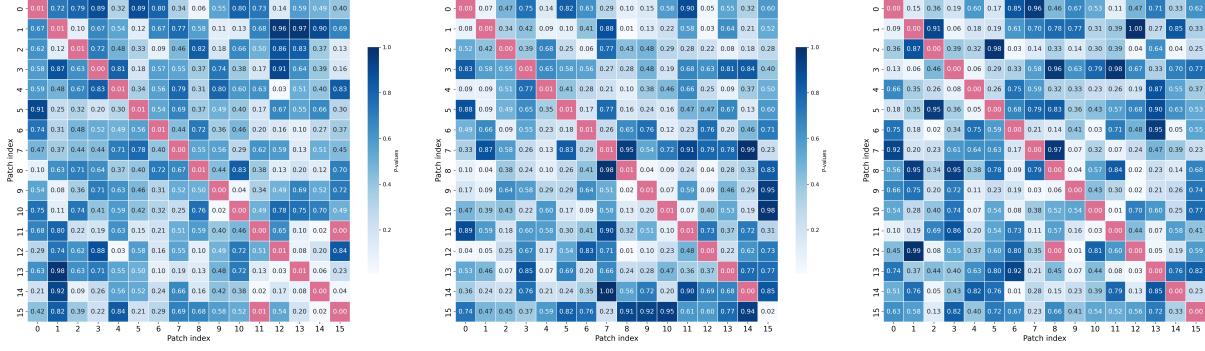


(c) DMAD-Cable; DMAD-Capsule; DMAD-Grid (from left to right).

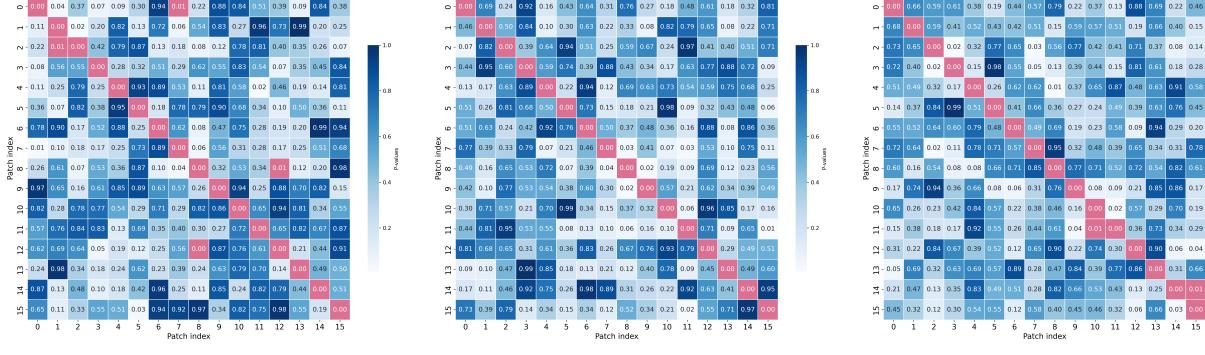


(d) DRAEM-Cable; DRAEM-Grid; DRAEM-Hazelnut (from left to right).

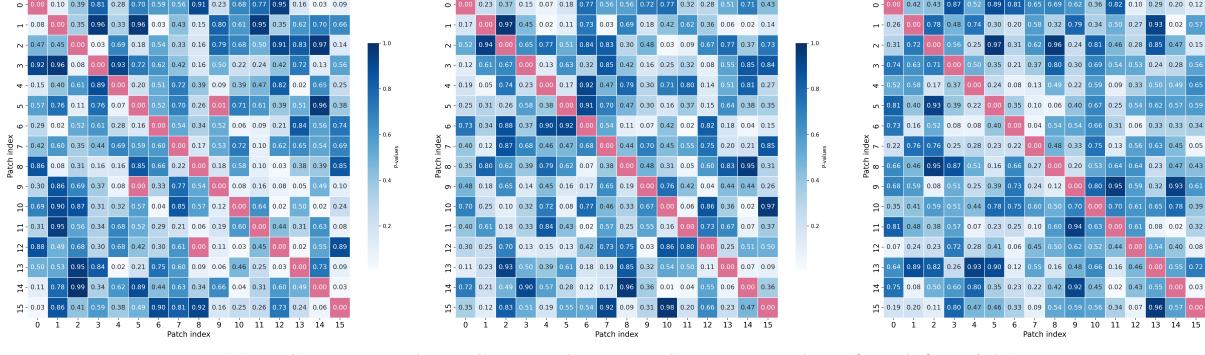
Hierarchical Martingale-based Testing Framework for Visual Anomaly Detection



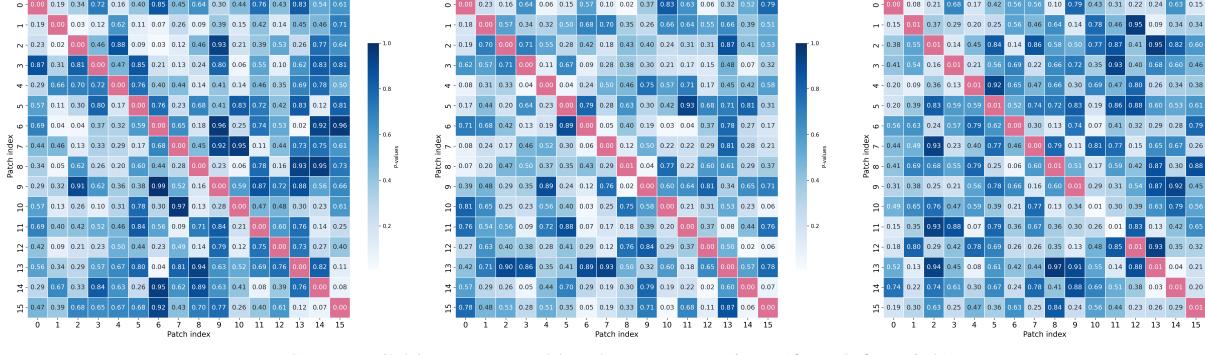
(e) PaDiM-Transistor; PaDiM-Wood; PaDiM-Zipper (from left to right).



(f) PatchCore-Pill; PatchCore-Tile; PatchCore-Toothbrush (from left to right).



(g) ReContrast-Bottle; ReContrast-Carpet; ReContrast-Hazelnut (from left to right).



(h) RRD-Cable; RRD-Toothbrush; RRD-Transistor (from left to right).

Figure 13: Independence test results on $Y(Z, S)$ across patches $\{Z_i\}_{i \in [0, 15]}$. Each image is first transformed into a score map via a score function, then split into non-overlapping 4×4 patches. Let Z_i denotes the i -th patch, whose multiple observations are obtained by sampling from MVTec dataset. The term *CFA-Cable* indicates that the images are sampled from the Cable category with CFA employed as the score function. The entry in row j and column k denotes the independence test result between the j -th patch and the k -th patch. Values greater than 0.01 (blue and white squares in the figure) indicate that the $Y(Z, S)$ are independent.