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Unified Multi-spectral Pedestrian Detection Based on Probabilistic Fusion Networks

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Highlights

- We propose a unified CNN architecture for the task of multispectral pedestrian detection and formulate the entire network to be learned in an end-to-end manner.
- Unlike existing multispectral fusion techniques, we comprehensively utilize color, thermal, colorthermal fusion features to maximize detection performance by synergistically using their detection probabilities with channel weighting fusion (CWF) and accumulated probability fusion (APF).
- The proposed system significantly reduces the missing rate of baseline method by 5.60%, yielding a 31.36% overall missing rate on the KAIST multispectral pedestrian benchmark

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