Computationally Efficient Fog Computing System for Real–Time Coffee Berry Borer Detection via Optimized YOLOv26

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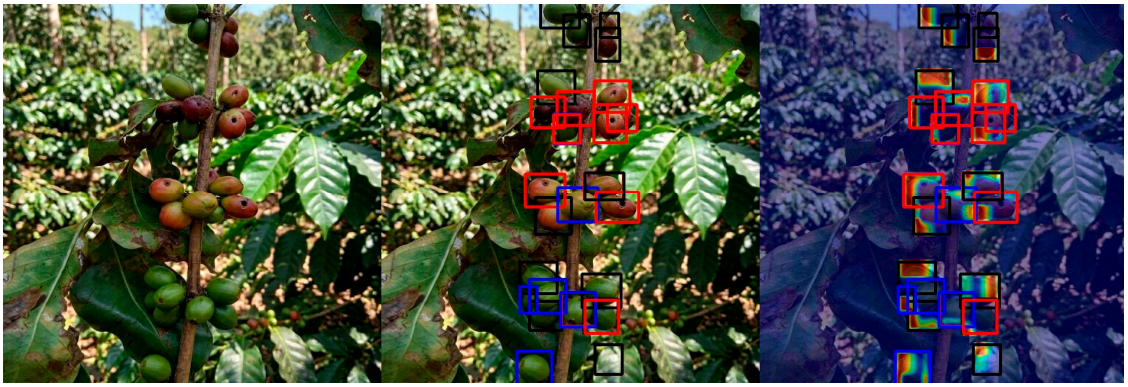


Figure S1. XAI-based interpretability analysis of coffee berry pathology detection using Eigen-CAM for M0.

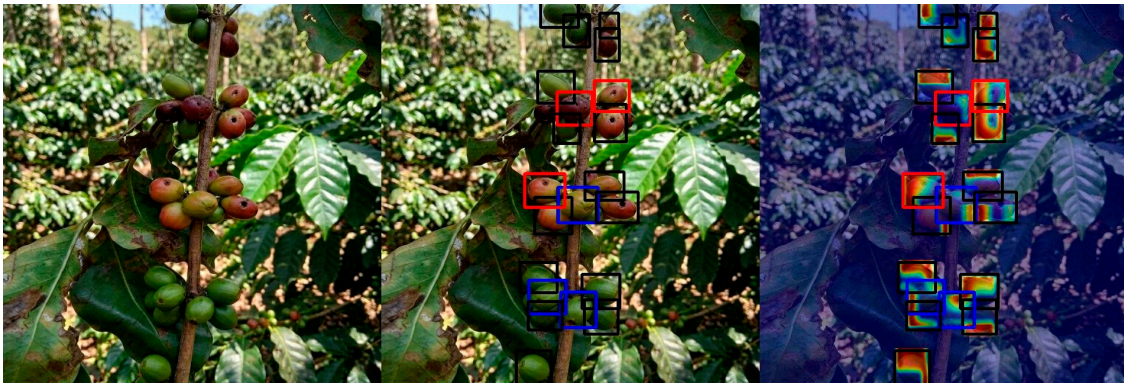


Figure S2. XAI-based interpretability analysis of coffee berry pathology detection using Eigen-CAM for M1.

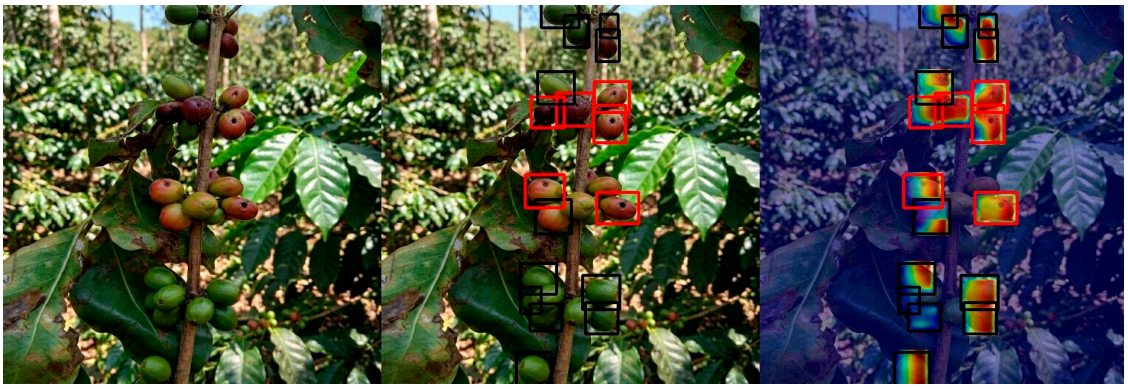


Figure S3. XAI-based interpretability analysis of coffee berry pathology detection using Eigen-CAM for M2.

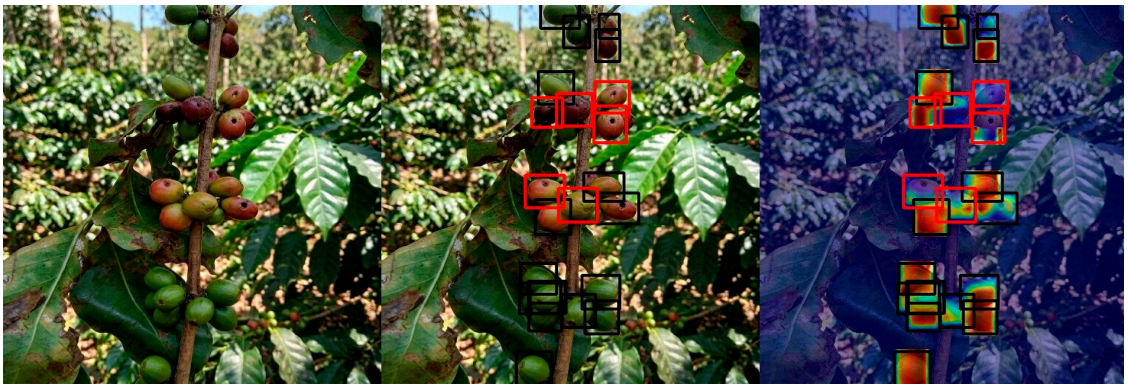


Figure S4. XAI-based interpretability analysis of coffee berry pathology detection using Eigen-CAM for M3.

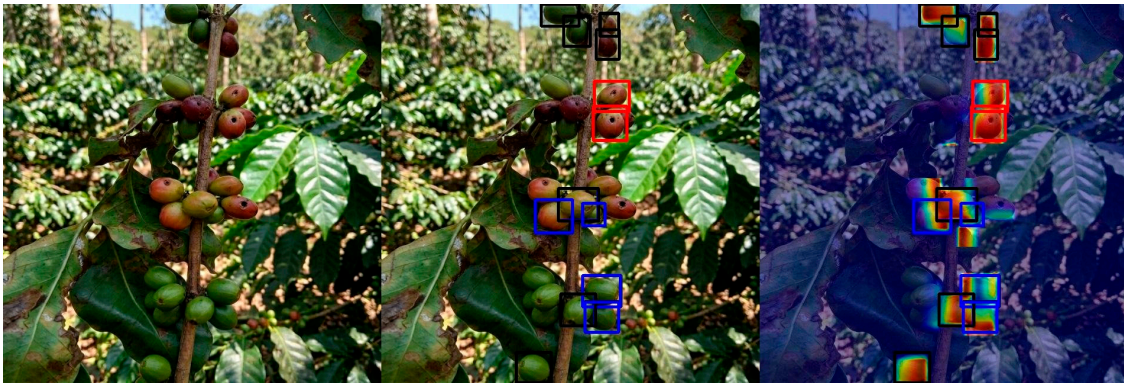


Figure S5. XAI-based interpretability analysis of coffee berry pathology detection using Eigen-CAM for M4.

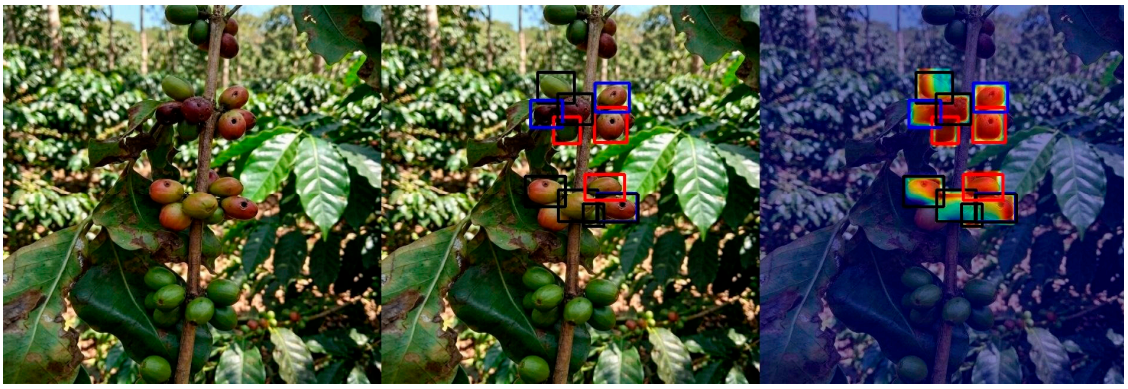


Figure S6. XAI-based interpretability analysis of coffee berry pathology detection using Eigen-CAM for M5.

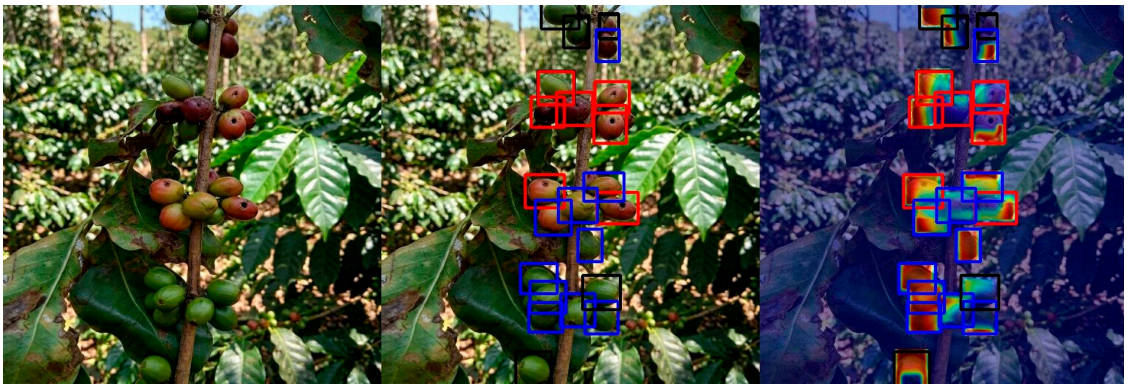


Figure S7. XAI-based interpretability analysis of coffee berry pathology detection using Eigen-CAM for M6.

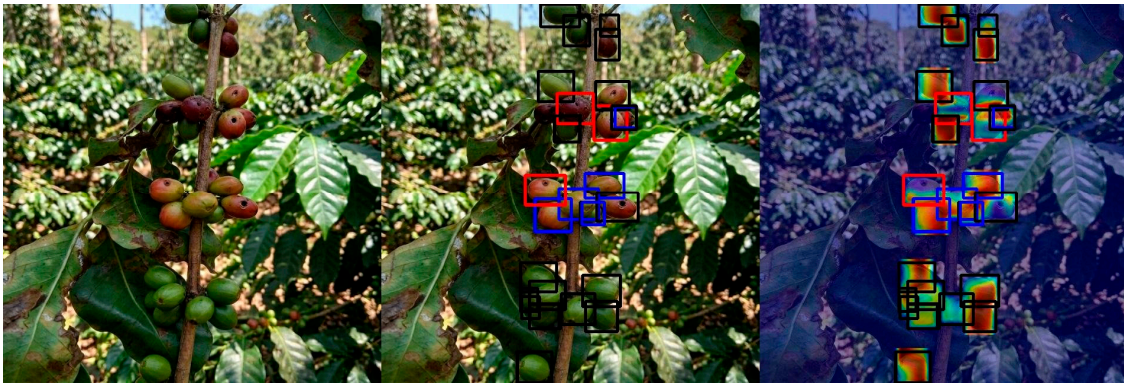


Figure S8. XAI-based interpretability analysis of coffee berry pathology detection using Eigen-CAM for M7.

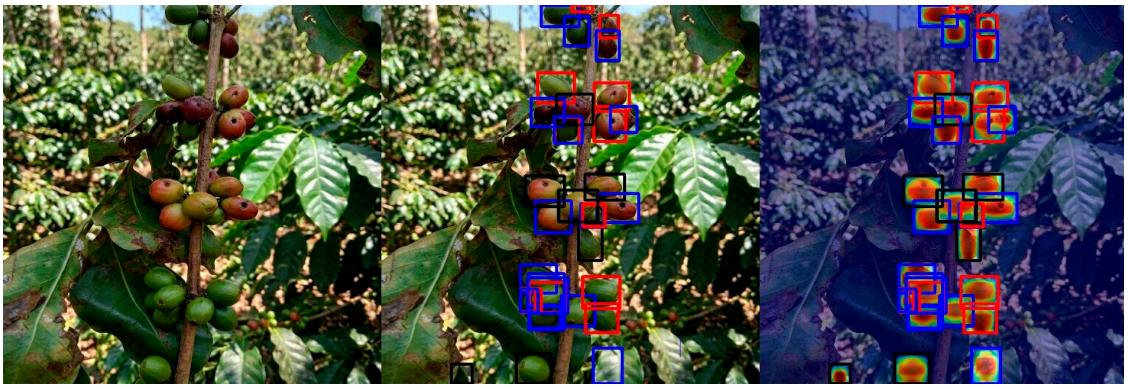


Figure S9. XAI-based interpretability analysis of coffee berry pathology detection using Eigen-CAM for M8.

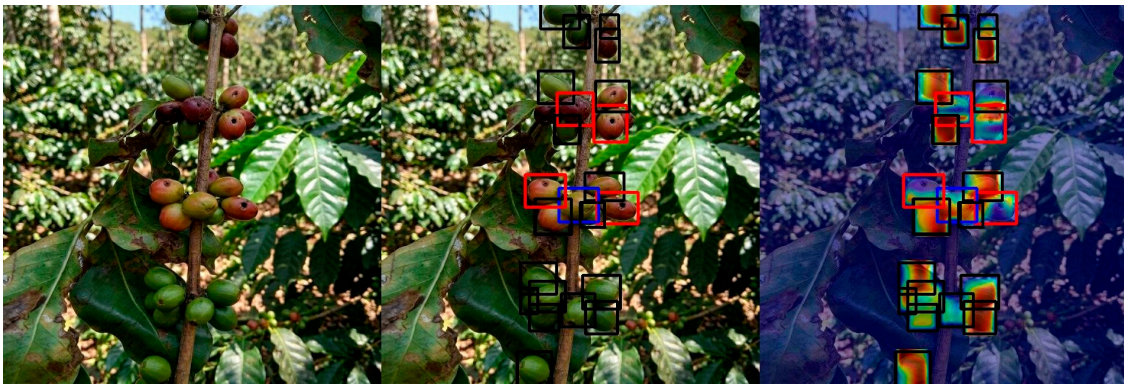


Figure S10. XAI-based interpretability analysis of coffee berry pathology detection using Eigen-CAM for M9.

Table S1. Detailed F1-score breakdown for the CBB detection sample analyzed in the XAI study for the Figures S1-10.

Model	**F1-score**			
	Healthy	**Infected**	**Damaged**	**Mean**
M0	**0.4706**	**0.7143**	**0.1538**	**0.4462**
M1	**0.4000**	**0.6000**	**0.1250**	**0.3750**
M2	0.0000	0.7692	0.1429	0.3040
M3	0.0000	0.7143	0.1250	0.2798
M4	0.2500	0.4444	0.0000	0.2315
M5	0.0000	0.2000	0.0000	0.0667
M6	**0.7273**	**0.7143**	**0.2857**	**0.5758**
M7	0.3529	0.6000	0.0952	0.3494
M8	0.5600	0.3529	0.0000	0.3043
M9	0.1538	0.7273	0.1000	0.3270