Performance Analysis of MVFF Model vs State-of-the-Art Architectures

AUC Comparison Across Models

Accuracy Comparison Across Models

ROC Curves for Normal/Abnormal Classification

Legend:
- VGG16 (AUC=0.910)
- VGG19 (AUC=0.940)
- InceptionV3 (AUC=0.890)
- ResNet50 (AUC=0.870)
- MVFF (AUC=0.934)

Model Performance Heatmap

	VGG16	VGG19	InceptionV3	ResNet50	MVFF
Normal/Abnormal AUC	0.910	0.940	0.890	0.870	0.934
Mass/Calc AUC	0.890	0.910	0.880	0.855	0.932
Malignant/Benign AUC	0.820	0.830	0.810	0.790	0.840
Normal/Abnormal Acc	0.920	0.934	0.900	0.880	0.937
Mass/Calc Acc	0.890	0.900	0.870	0.857	0.923
Malignant/Benign Acc	0.810	0.820	0.800	0.780	0.850

Input Mammograms → Pre-processing → Data Augmentation → Feature Extraction → Feature Fusion → Classification → NormalAbnormal / MassCalcification / MalignantBenign

ResNet50