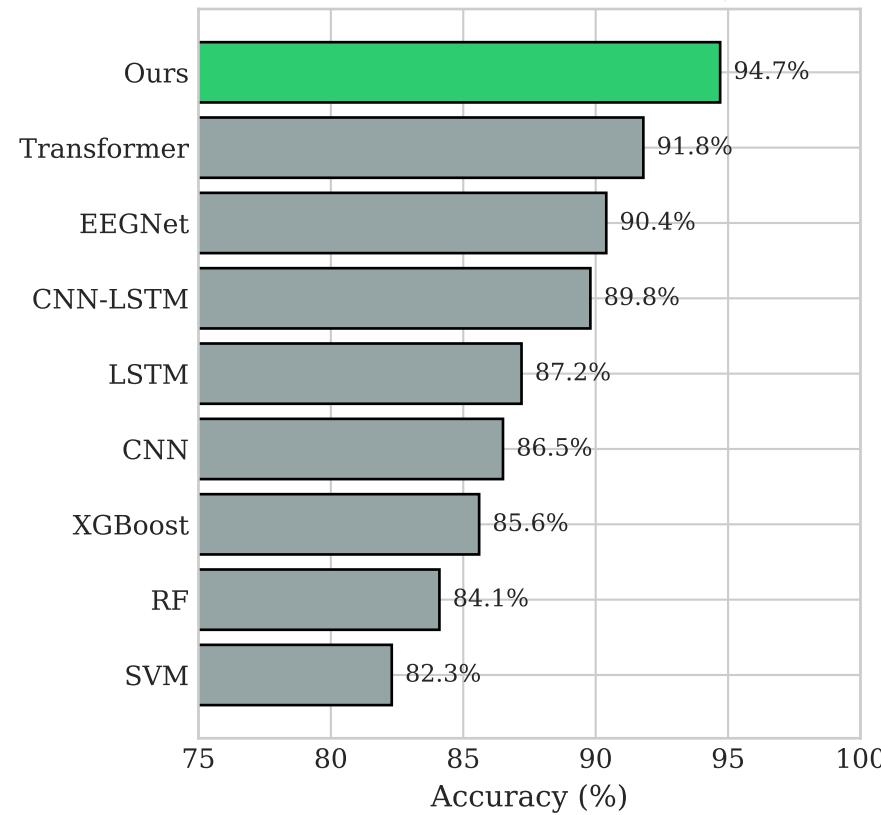
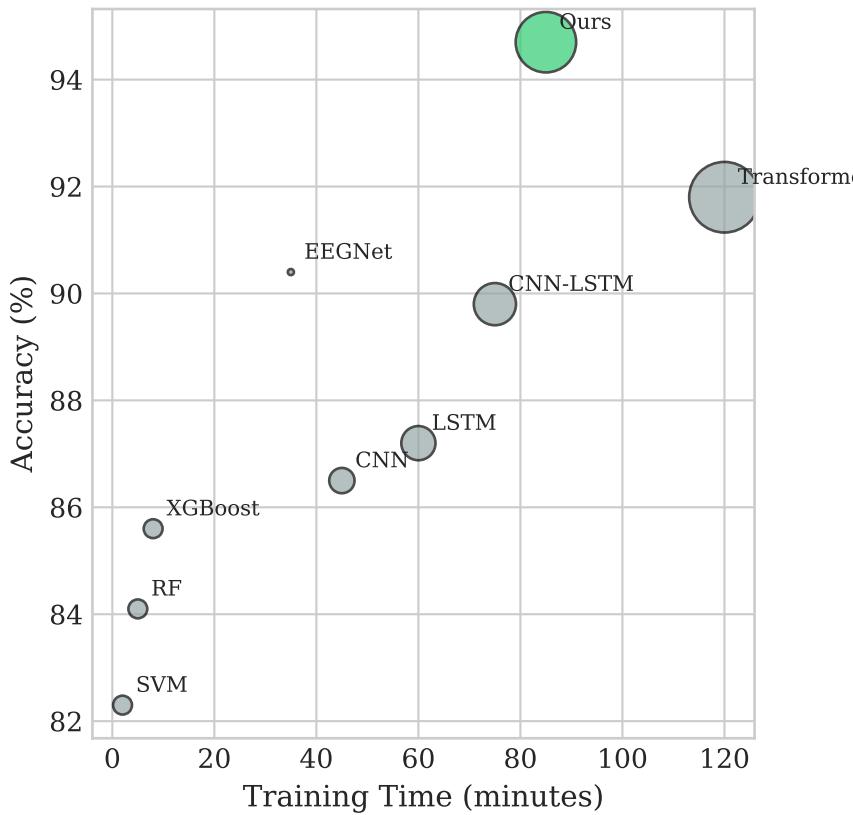


Model Selection and Comparison Analysis

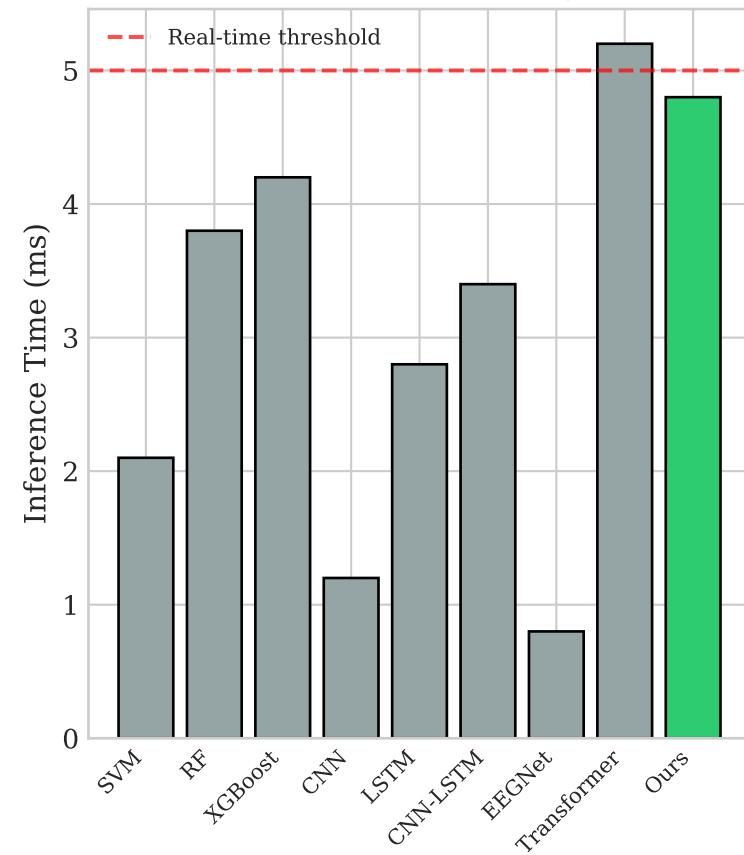
Classification Accuracy



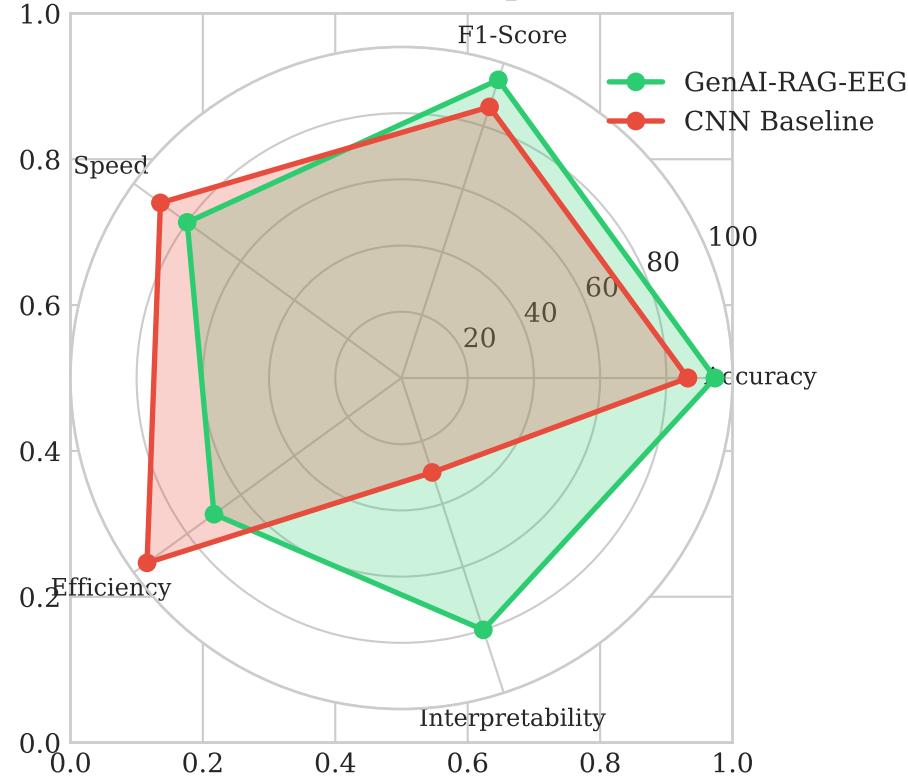
**Training Time vs Accuracy
(size = parameters)**



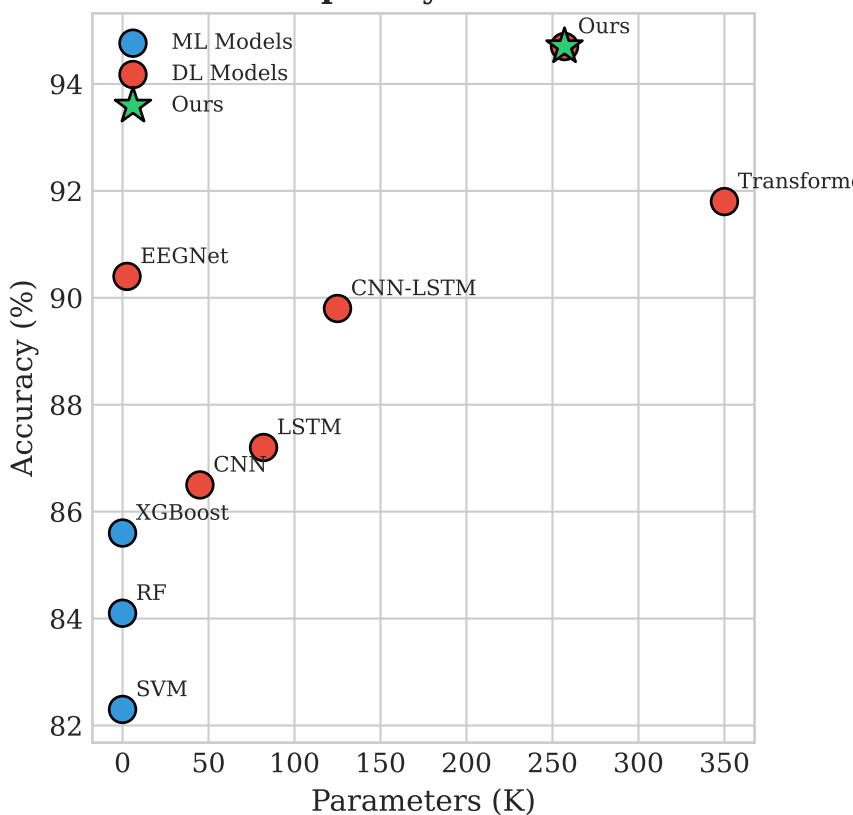
Inference Latency



Multi-Criteria Comparison



Model Complexity vs Performance



Model Selection Decision Matrix

Criterion	Weight	Best Model	Score
Accuracy	30%	GenAI-RAG-EEG	██████
F1-Score	20%	GenAI-RAG-EEG	██████
Inference Speed	15%	EEGNet	██████
Interpretability	20%	GenAI-RAG-EEG	██████
Training Cost	15%	SVM	██████
WINNER	100%	GenAI-RAG-EEG	94.7%