Cross-Fold Variance Analysis
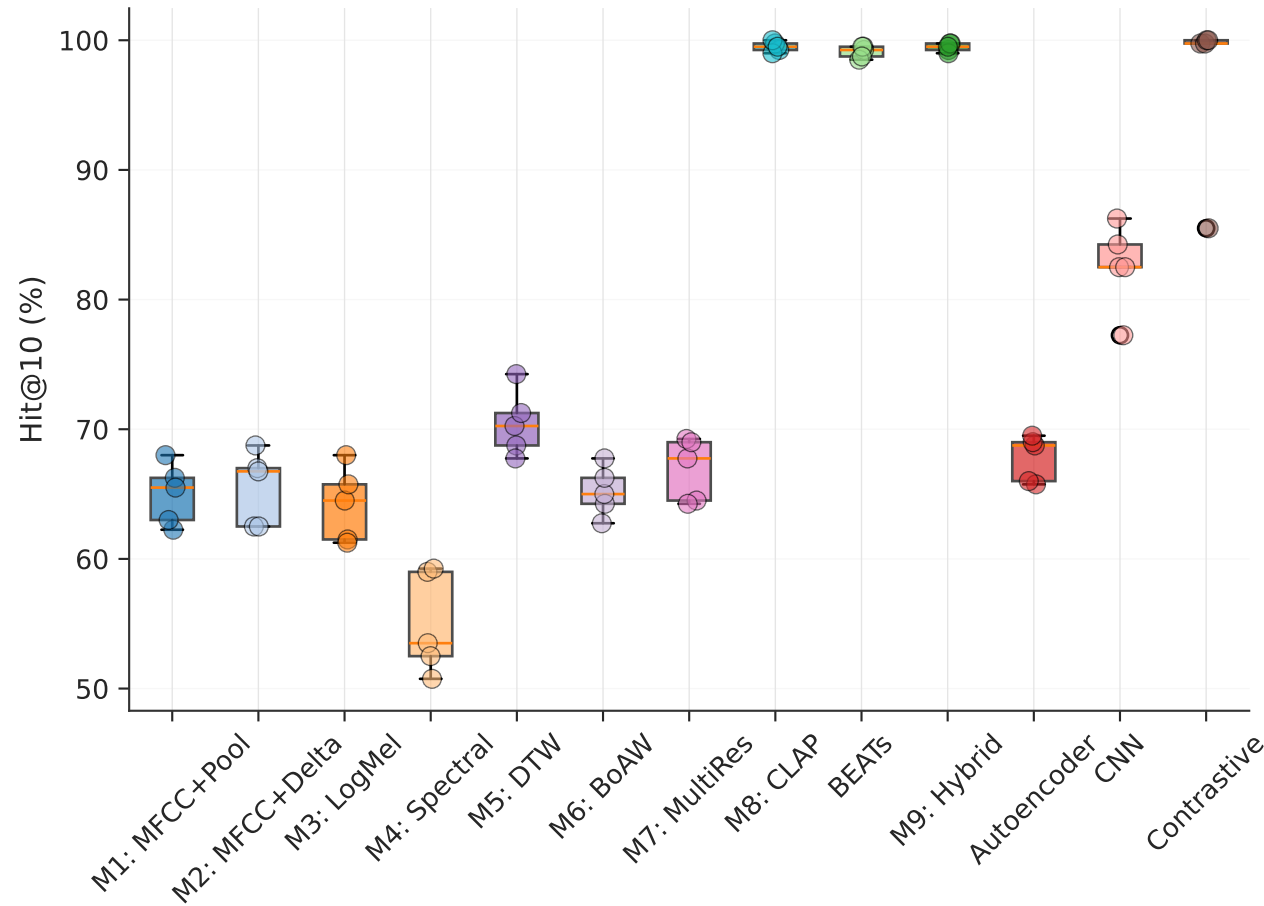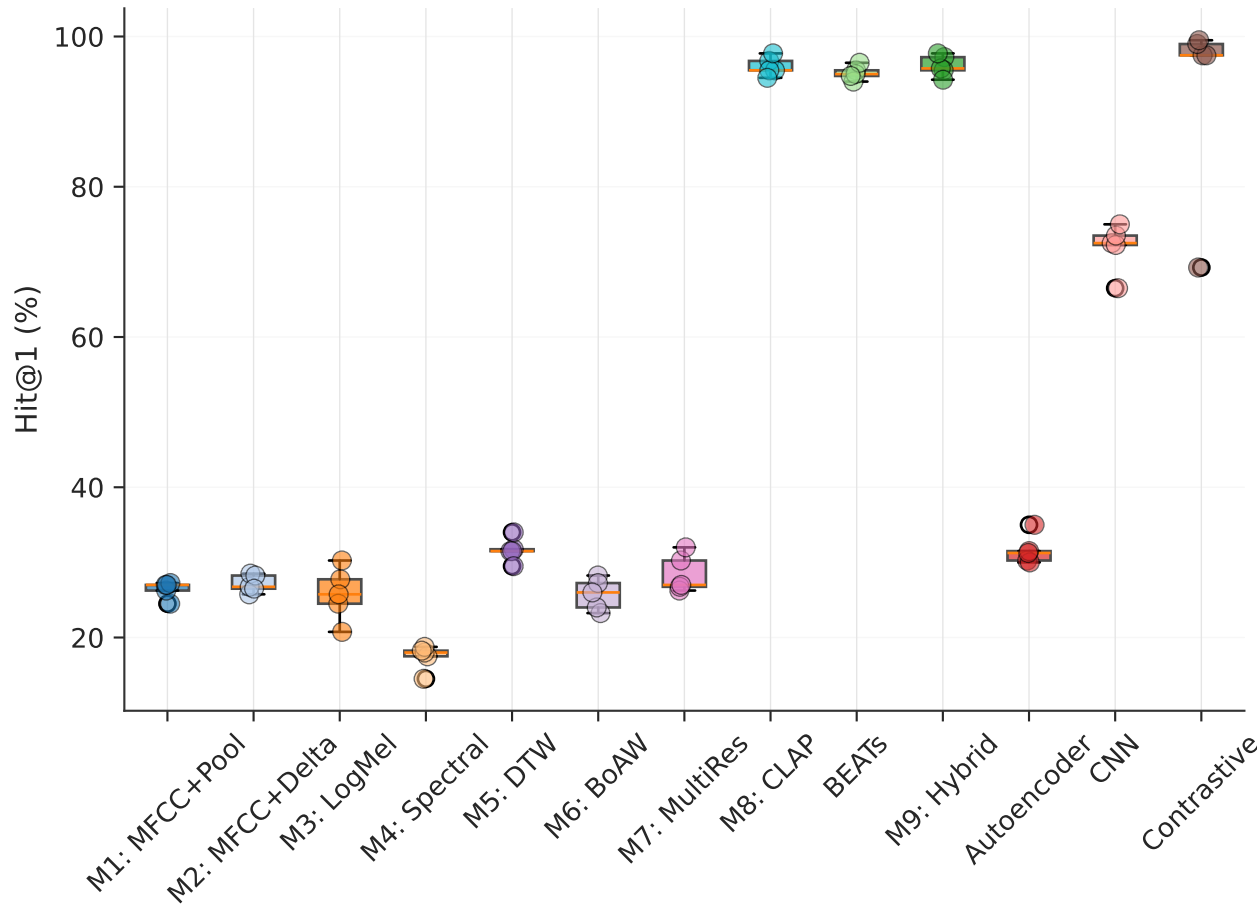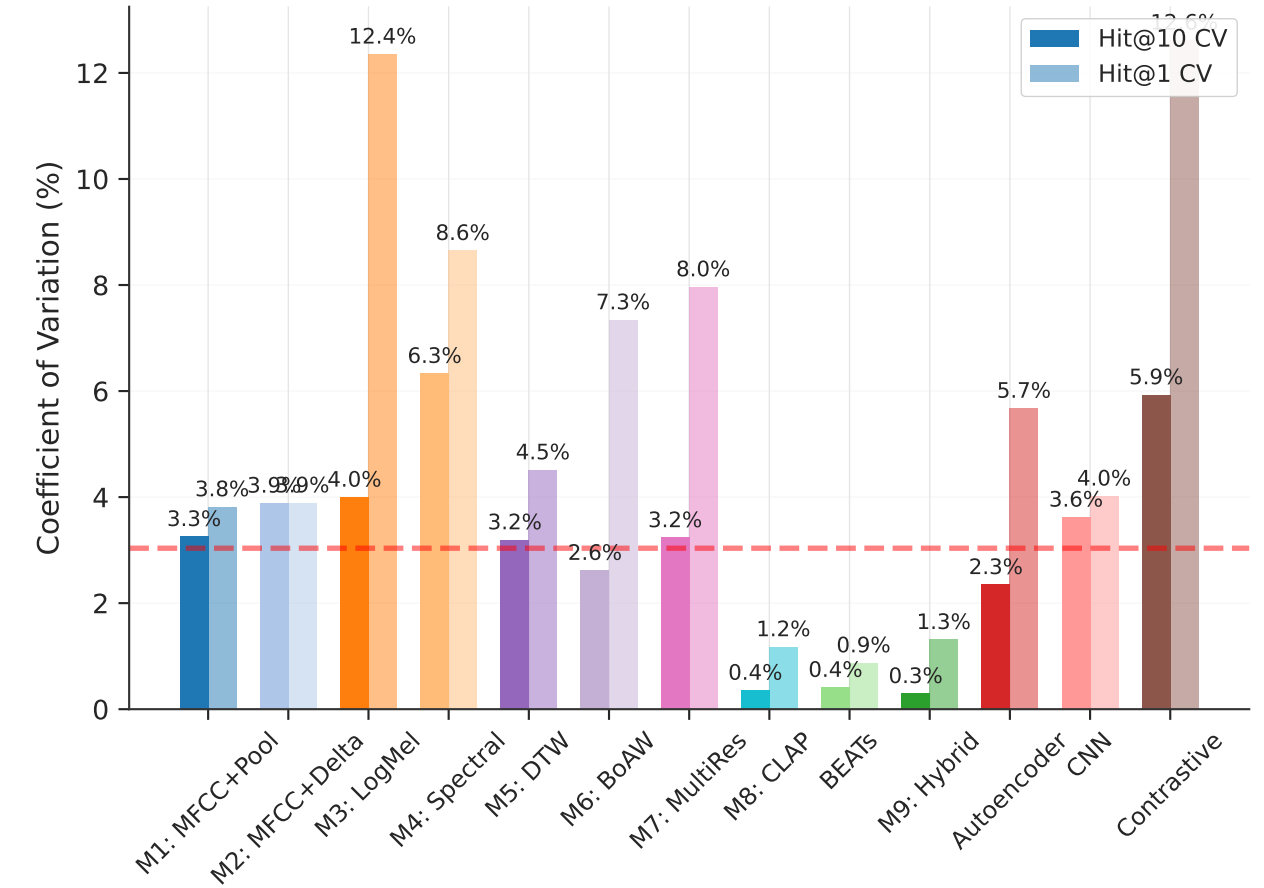
(a) Hit@10 Variance Across Folds

(b) Hit@1 Variance Across Folds

(c) Stability: Coefficient of Variation

Legend: Hit@10 CV, Hit@1 CV

CV values by method: M1: MFCC+Pool 3.3%, 3.8%; M2: MFCC+Delta 3.9%, 4.0%, 4.0%; M3: LogMel 12.4%, 6.3%; M4: Spectral 8.6%, 3.2%; M5: DTW 4.5%, 2.6%; M6: BoAW 7.3%, 3.2%; M7: MultiRes 8.0%; M8: CLAP 0.4%, 1.2%; BEATs 0.4%, 0.9%; M9: Hybrid 0.3%, 1.3%; Autoencoder 2.3%, 5.7%; CNN 3.6%, 4.0%; Contrastive 5.9%, 13.6%

(d) Hit@10 Heatmap by Method × Fold

Method	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
M1: MFCC+Pool	62.3	63.0	66.2	65.5	68.0
M2: MFCC+Delta	62.5	62.5	67.0	66.8	68.8
M3: LogMel	61.5	61.3	64.5	65.8	68.0
M4: Spectral	53.5	50.7	59.0	59.2	52.5
M5: DTW	68.8	70.2	71.2	74.2	67.8
M6: BoAW	62.7	64.2	65.0	67.8	66.2
M7: MultiRes	64.5	64.2	67.8	69.2	69.0
M8: CLAP	99.2	99.8	99.0	100.0	99.5
BEATs	99.2	99.5	98.5	99.5	98.8
M9: Hybrid	99.2	99.8	99.0	99.8	99.5
Autoencoder	68.8	65.8	66.0	69.0	69.5
CNN	84.2	82.5	82.5	86.2	77.2
Contrastive	99.8	99.8	100.0	100.0	85.5