AI Music for Musicologists

Computational Motif and Pattern Analysis in Specific Composers
Use symbolic tools (Music21, Humdrum, FANTASTIC) to study motivic technique across a corpus.

Quantitative Studies of Repetition and Form
Apply segmentation algorithms and pattern-discovery methods to analyse large sets of works.

Corpus-Based Study of Modal Practices
Use pitch-class distributions and interval statistics to analyse modal tendencies in Renaissance or Byzantine repertories.

Measuring Expressive Timing in Historic vs. Modern Performances
Analyse rubato, articulation, and tempo curves in recorded performances.

AI-Assisted Schenkerian or Paradigmatic Analysis
Evaluate how computational tools align with or diverge from traditional analytical frameworks.

Cross-Cultural Melodic Feature Analysis
Extract and compare interval structures and contour types in different musical traditions.

Semantic Descriptors in Music Criticism vs. Audio Features
Compare qualitative descriptors ("warm," "bright," "tense") with measurable acoustic parameters.

Music Similarity and Authorship Studies
Use symbolic embeddings or feature sets to examine stylistic fingerprints or disputed attributions.

Digital Editing and Encoding of Manuscripts
Encode critical editions in MEI; compare encoding-based analyses with traditional editorial approaches.

AI-Augmented Analysis of Improvisation
Study patterns, vocabulary, and structural constraints in jazz or modal improvisations using machine-learning clustering.

Corpus Linguistics Meets Corpus Musicology
Compare textual and musical corpora on issues like repetition, formulaicity, and structural markers.

Perception of Musical Structure with AI-Derived Features
Test whether algorithmic boundaries align with listener judgments.

Computational Study of Rhythm and Meter in Non-Western Traditions
Analyse asymmetric metres, tala cycles, or microtiming patterns using symbolic or audio tools.

Music Recommendation Bias and Genre Construction
Examine how recommender systems mediate cultural visibility and shape genre identities.

Emotion and Meaning in Music: Listener Studies + Audio Features
Combine surveys with feature extraction to explore cognitive or affective responses.

Machine Learning for Chant or Folk-Music Classification
Classify regional or stylistic variants and evaluate ethnomusicological relevance.

AI Tools for Music Pedagogy and Analysis
Evaluate how music-analysis AI supports student learning or analytical reasoning.

Digital Humanities Approaches to Music Reception
Analyse large text corpora (reviews, essays) alongside musical features to study reception history.