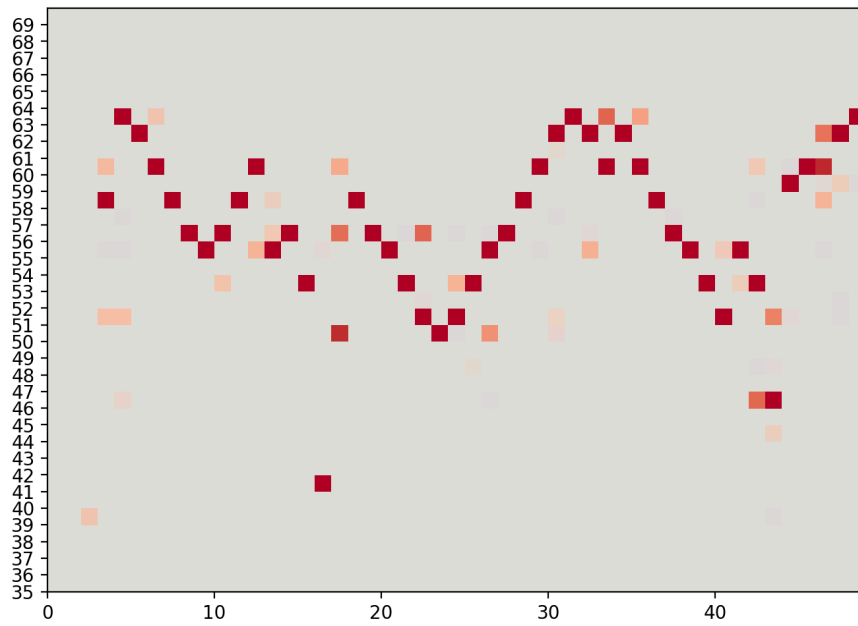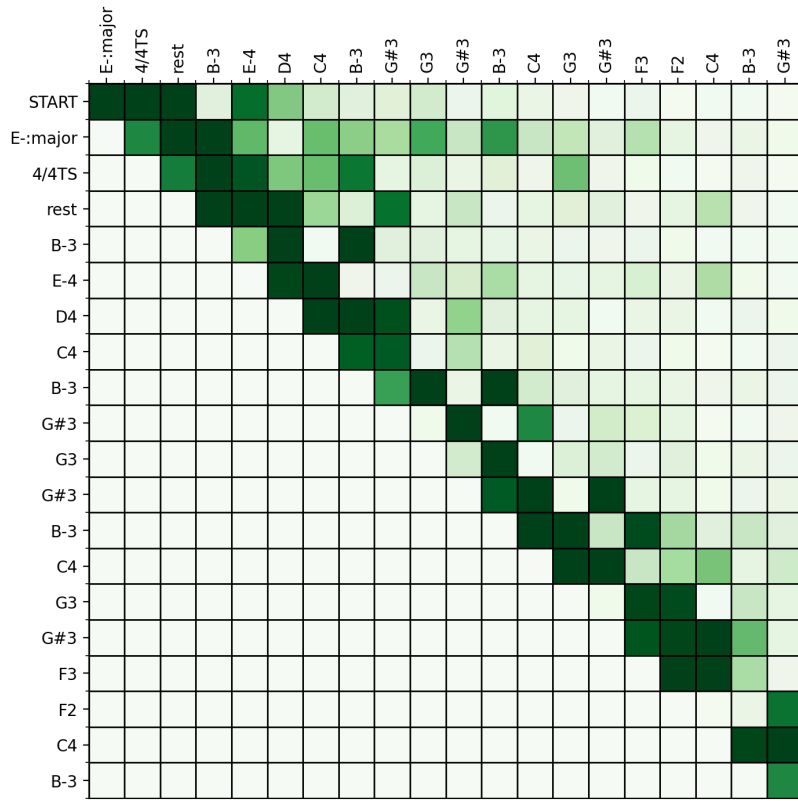**GenAI Assignment 6**

Brennan Duff

December 5, 2024

Tonal Center: The concentration of darker red regions suggests the model has identified and is frequently using notes that could correspond to a tonal center. Bach's compositions typically feature a clear tonic and dominant relationship, and these notes are often repeated. This pattern is somewhat consistent with the model's behavior, especially in more structured parts of the composition.

Chromaticism and Modulation: The presence of lighter, less frequent notes indicates that the model also ventures into chromatic or modulating territory (I think?). The way the model uses it sounds more like an imitation of the style more than an understanding.

Harmonic Progression: Bach's music is well-known for its harmonic progressions and stable use of key relationships. The note distribution in the probability chart suggests that the model likely favors harmonic stability by focusing on certain notes more than others. In practice the model adheres to a harmonic progression decently

Local Dependencies (Diagonal Attention): The strong diagonal bands in the attention map imply that the model is heavily relying on immediate context when making decisions about which notes to generate. This aligns with Bach's technique of using motifs and sequences within a short-term context.

Long-range Dependencies (Off-diagonal Attention): The attention map also shows off-diagonal clusters, which indicates that the model can consider longer-term dependencies between notes. Bach's fugues and counterpoints rely

heavily on maintaining harmonic relationships over time, and the model replicates that decently.

Overall: I think the model did a decent job imitating the style of Bach, but not enough to where it sounds like it understands the style. It sounds like Bach a little, but little things give it away. Regardless, you can tell that the influence of Bach is present in the midi. (The temperature at .5 might be a little too loose, giving it .3-.4 might've made it sound better.)