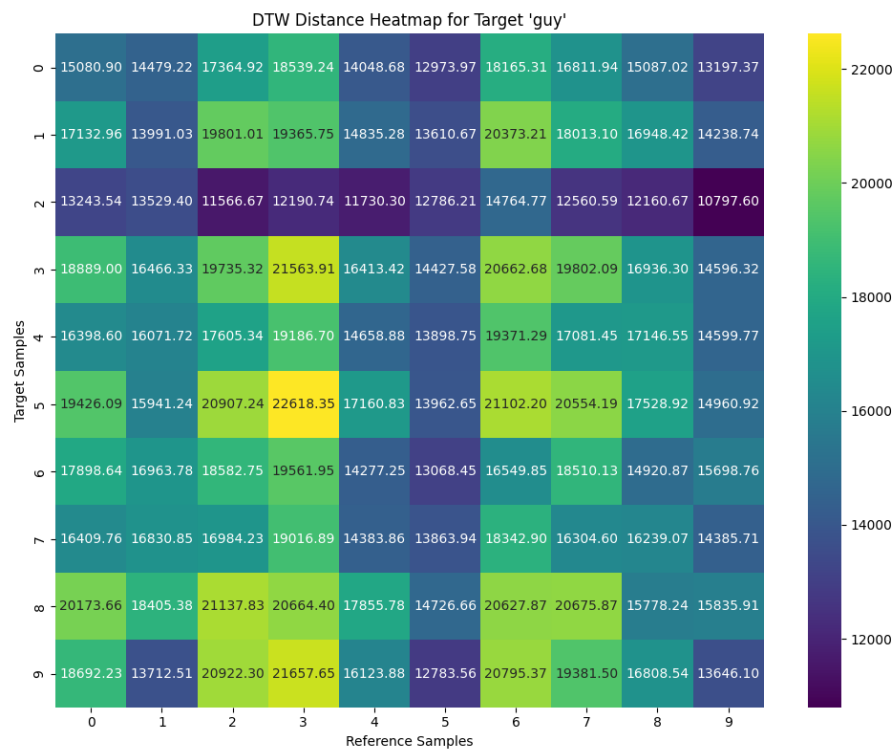
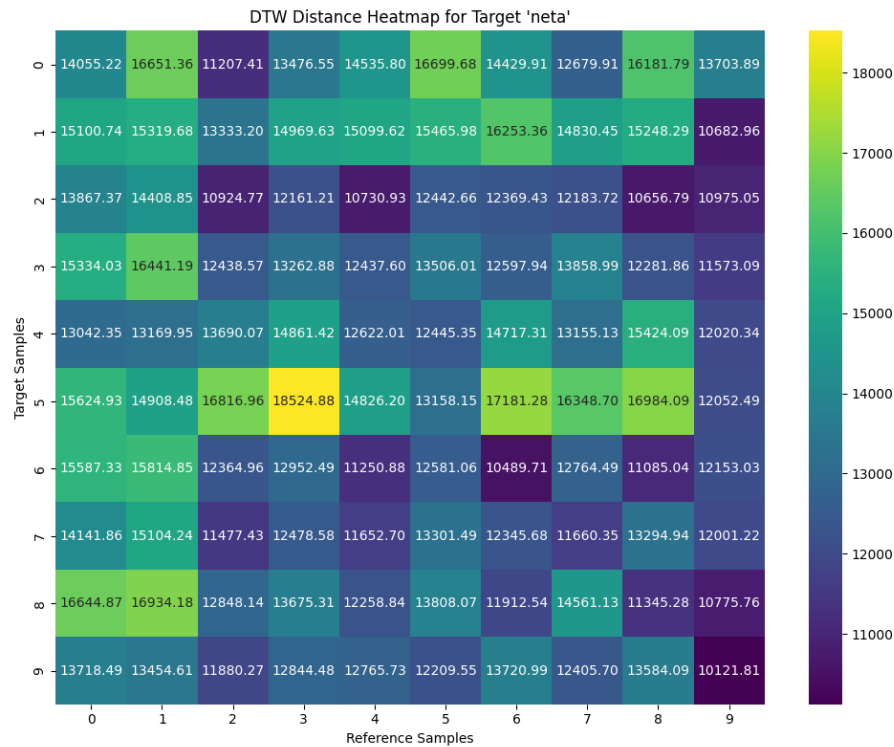
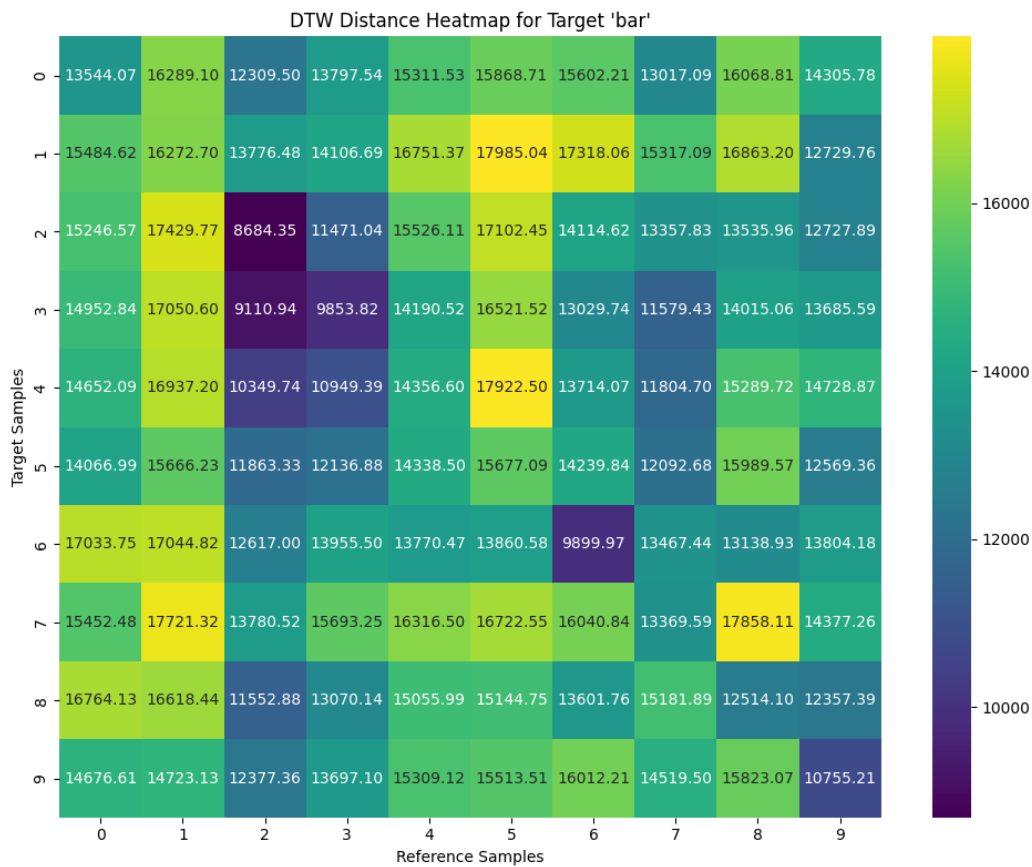


Q2.d: i. Within Speaker (Different Digits): Spectrograms for different digits will show slight phonetic differences, but overall speaker-specific features like pitch and tone remain consistent

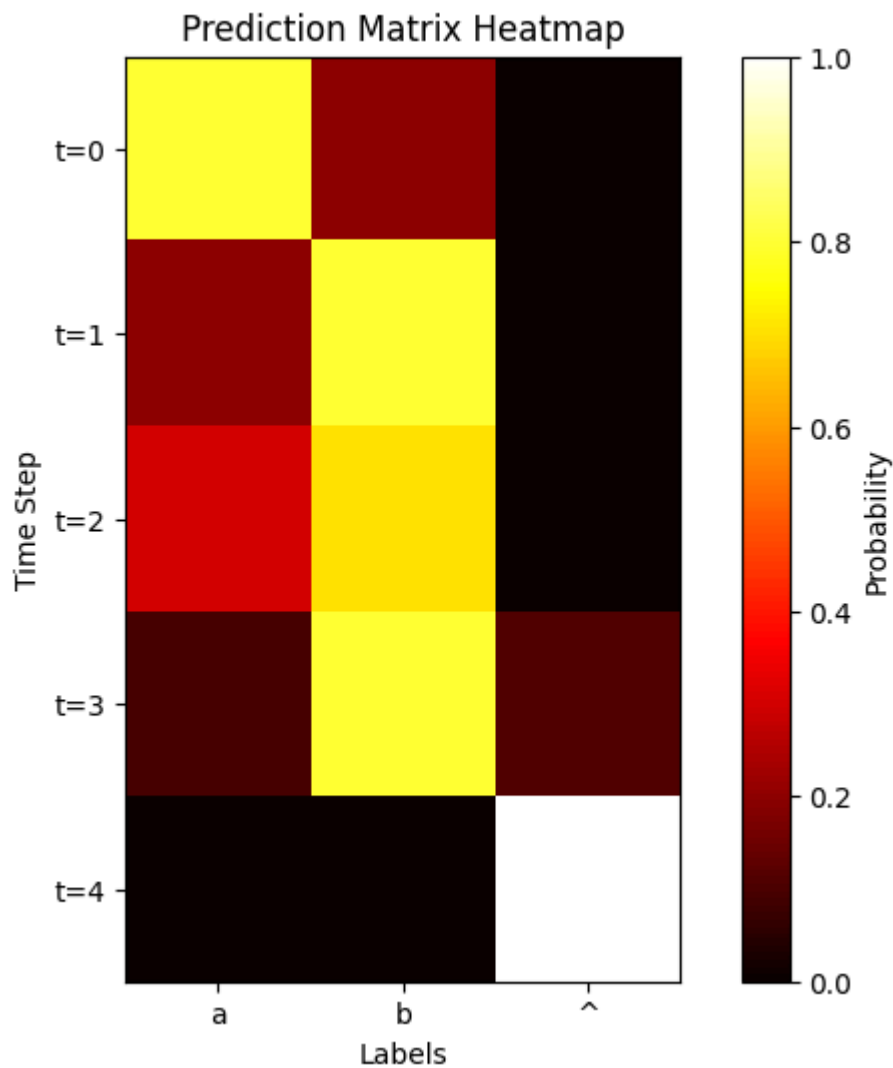
ii. Across Speaker (Different Speakers/Genders): Male voices typically show more energy in lower frequencies, while female voices have more energy in higher frequencies.

Q3: e.





5. d.

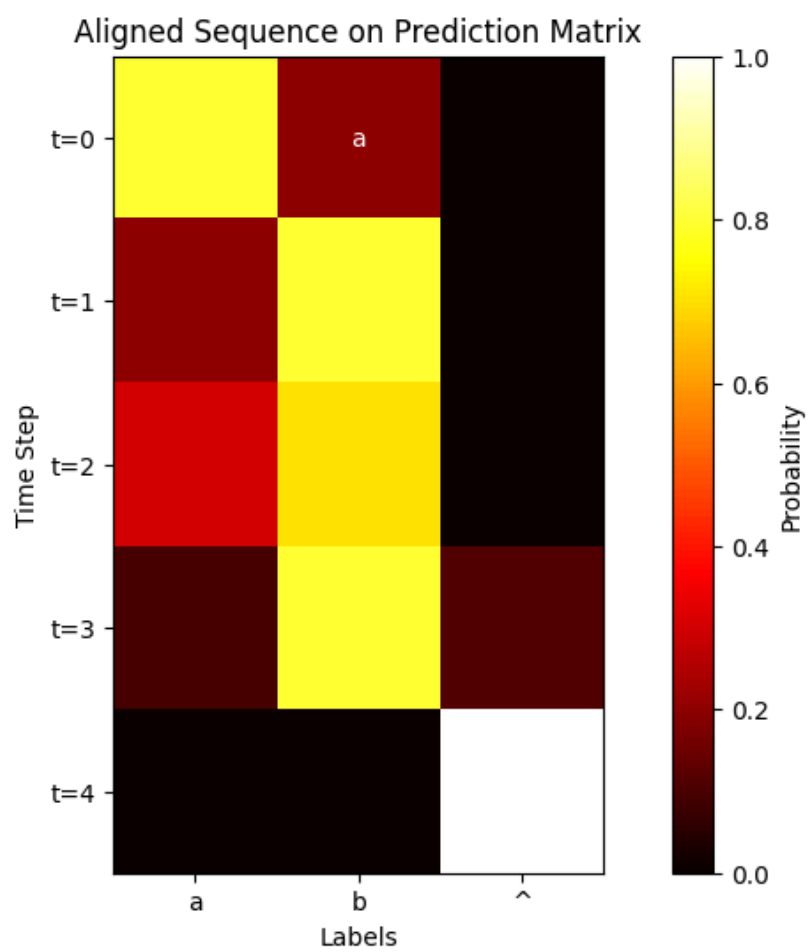


6.

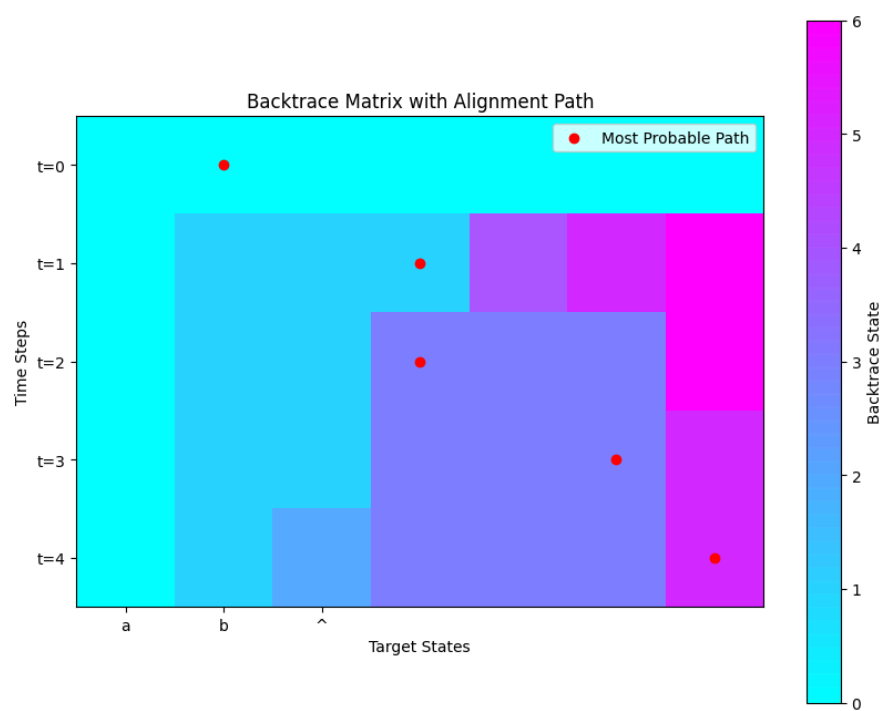
c.

The probability of the most probable path for the sequence "aba" is the value of the maximum probability computed at the final time step, which is obtained from the **alpha** matrix by considering the last two states of the expanded target sequence.

d.

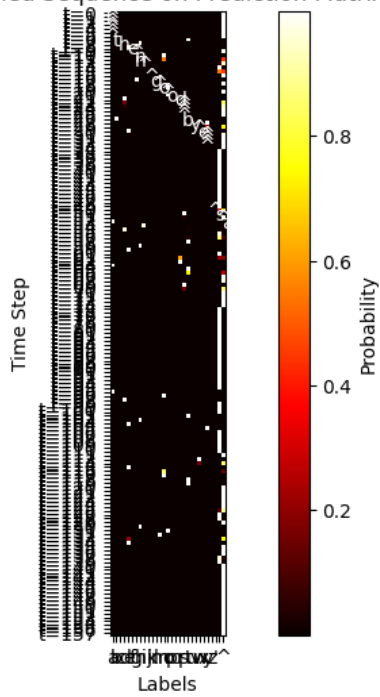


e.



7. d.

Aligned Sequence on Prediction Matrix



e.

Backtrace Matrix with Alignment Path

