research project topic proposal

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topic summary

implement a **finite-state transducer** that will take a string of user-inputted text in its lexical form, apply a certain morphological rule, and return the transcribed surface representation. the language we will be testing is **korean**. the goal of this project is to combine morphological rules and computational linguistics so as to create a simple, functioning program that will demonstrate derivation processes much like those discussed and practiced in class.

for this project, we will solely be focusing on different scenarios of coda neutralization in the korean language, including:

(1) ***laryngeal neutralization***
merges all underlying laryngeal distinctions into homorganic lax stop consonants

(2) ***manner neutralization***
merges fricatives into a lax coronal stop [t]

(3) ***palatal neutralization***
merges all underlying palatal distinctions into a lax coronal stop [t]

in order to implement these rules, we will construct a c++ program that does the following:

(1) define the set of consonants and syllables seen in the korean language

(2) define and implement a function for each rule that will take a given underlying representation, distinguish whether any of the rules apply, and if so implement that rule in order to produce the correct surface representation

(3) the program will also be able to take a surface representation and derive the underlying form by applying the rules backwards (?)