Summary

There is two ways to achieve better user interfaces than mouse and keyboard: Speech recognition and Handwriting. Although a handwriting interface expects users to be literate, it ensures a higher degree of privacy and confidentiality compared to speech. So we pick handwriting and more specifically about online Arabic Handwriting Recognition using HMM. HMM is a statistical model in which the system being modeled is assumed to be a *Markov process* with unknown parameters, and the challenge is to determine the hidden parameters from the observable parameters. The *Markov process* future states of the process, given the present state and all past states, depends only upon the present state and not on any past states, i.e. it is conditionally independent of the past states. To constrain the space of search, we utilize a dictionary of possible valid words. This ensures better recognition rates compared to systems that can recognize any arbitrary permutation of letters.

Recourses:

Online Arabic Handwriting Recognition Using Hidden Markov Models
Fadi Biadsy, Jihad El-Sana, Nizar Habash

Hidden Markov Models
http://jedlik.phy.bme.hu/~gerjanos/HMM/node2.html

Obstacles

Searching for good topic
Understanding the HMM process
Understanding some parts of the paper and determining which part is related to NLP

Leant Skills

Better presentation
Answering Questions in class
Ways to search for papers

Recommendation

Giving more sites and suggesting topics for student

True/ false

The Markov process future states of the process, given the present state and all past states, depends only upon the present state and not on any past states. TRUE

One of Arabic problems is the number of alphabets FALSE

Words are check using a dictionary of word parts. TRUE