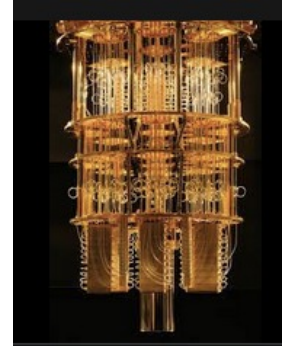
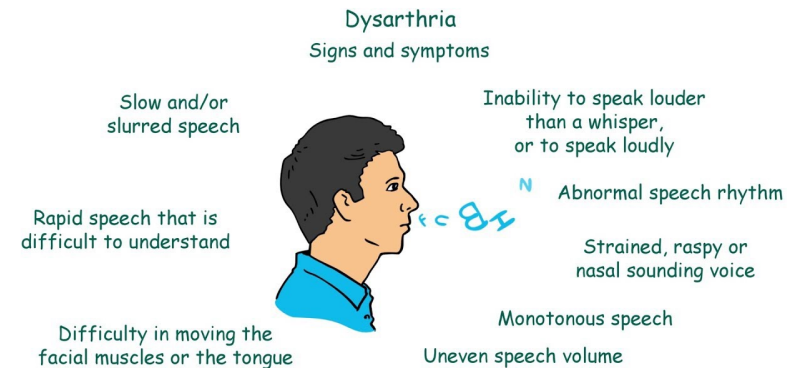


REU Project: Quantum Machine Learning for Dysarthric Speech Recognition

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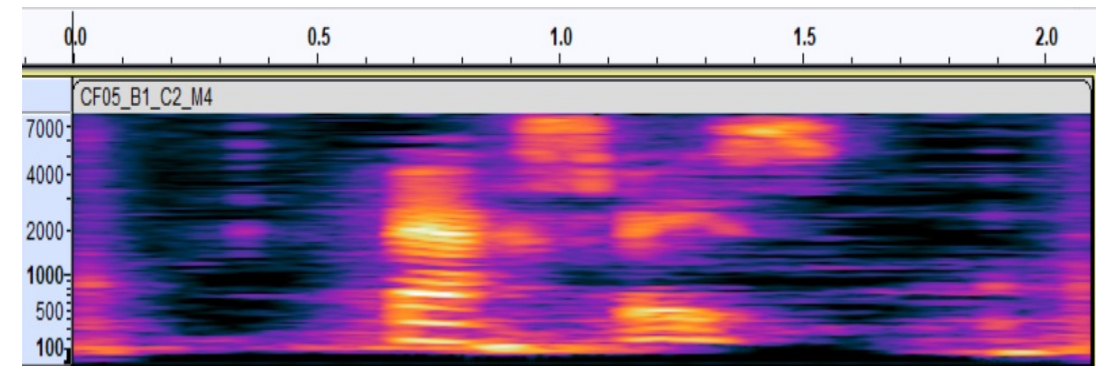


- ❑ Dysarthria is defined as imperfect articulation of speech caused by neuromuscular and cognitive damage
- ❑ Can quantum machine learning and speech processing assist in early recognition of cognitive illness such as CTE or ALS?
- ❑ Steps
 - ❑ Obtain data from dysarthric speech databases
 - ❑ Denoise and Normalize data
 - ❑ Generate Spectrograms from data
 - ❑ Create SVM model to identify speaker as dysarthric or control
 - ❑ Create QSVM version of model and optimize



Quantum Computer

Uttaranchal (P.G) College of Bio-Medical Sciences & Hospital



Spectrogram of female control speaking the word "backspace"