#Requirements

→ isko ab refine karna hai → further into high level low level

-> Should be abel to discriminate which single type of modulaton scheme is present

-> Network should be able to discriminate which modulation scheme is present based on an input radio signal picked off the air

-> Perform on short time samples

-> Should be protable with SDR

-> Should be able to effectively distinguish different modulation schemes

-> Should be able to ditinguish a large type of modulation schemes

-> SHould be able to to distinguish both analog and digital signals

-> Should be flexible so that new modulation types can be added and trained effectively

-> Should be able to perform well at low SNR ranges

-> should be able to perform under realistic channel codnitions

--> list out all chanbnel imperfetions added

-> Should be able to train and test system remotely

-> be able to compare with publications on benchmark dataset in application domain

-> low computational complexity

-> should use deep learning

Tools : Google Colaboratory, Python , Tensorflow, Keras , SciPy, Numpy, Pandas, Pickle list all libraries

3W1H

Who: This Project is developed to further research in the domain of Cognitive Radio, COmmunication intelligence for military and civilian applications. [Pick up usecases from Report]

What : A deep learning network that automatically classifies modulation type of window input radio signal [Look at problem statement from report]

When : To gather information about an unknown signal such as : use cases

Why : Previous techniques were poor . SLides refer

How : The network is fed with a sampled IQ data stream this stream is then processed by a trained network to output the most likely modulation scheme the signal uses

^^ all of this can be picked up from report and presentation

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SWOT ANalysis

Strength

Large Code base to expand upon

Performance can easily be benchmarked with standard dataset

Weakness

Opportunities

Threats

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