**Key Points**

**Data collection:**

* The signals for same digit can be different for different subjects. They can be also different for the same person every time.
* The subjects are usually asked to close eyes while they are thinking about the digit. This takes them in a passive state (not think of anything else).
* For arithmetic tasks, we use right hemisphere more. For visual tasks, we use left hemisphere more. Hence, we can give more weightage to the electrodes getting data from right hemisphere.

**Data Pre-Processing:**

* They used high and low frequency filters. High frequency 🡪 50 Hz, Low frequency 🡪 0.3 Hz
* Low pass filter is used to remove noise such as breathing, blinking etc.
* We have to be careful to not spend much time on pre-processing as it could be a time-critical task, depending on our implementation.

**Feature extraction:**

The EEG signals is in time-domain. Research says we can get better features in frequency domain. Hence, we could do FFT.