# LEARNING PLAN

**Student:** ……. Sippanon Sornkunkaew……………………………………………………………

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**Advisor:** …… Mr. Bawornsak Sakulkueakulsuk…...…………………………………………....

**Problem Statement:**

Patients around the world suffer from decease which cause them to unable to move their body but their brain still functional. Brain wave from the patient can be benefits to create something which help them to control their body again.

**Requirements:**

- The person must unable to move their body entire the experiment and training session

**Scopes:**

- Using EEG device to collect brain signal from a person who cannot move.

- Focus on improving brain signal to control movement of the model

- Control 1 motor Robotic hand (Control close and open)

**15-week Learning Plan/Work Schedule:** \*Everyday Research at least 1 paper

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Week** | **Topics to Learn** | **Deliverables** | | | | **Achieve** | | | | **Check** |
| 0 | What I want to do | Learning Plan | | | | ✓ | | | | ✓ |
| 1 | Survey of MI BCI Research and Experiment Design | Note | Presentation | | Experiment D1 | ✓ | ✓ | | ✓ | ✓ |
| 2 | ✓ |
| 3 | ✓ |
| 4 | ✓ |
| 5 | Learn EEG Signal acquisition  Signal Pre-processing – decrease noise | Preprocessed signals | | Experiment D2-3 | | 🞪 | | ✓ | | ✓ |
| 6 | ✓ |
| 7 | Feature extraction | Code | | Experiment D4 | |  | | | | ✓ |
| 8 | Classification – Training Algorithms | Code | | | |  | | | | ✓ |
| 9 | Experiment- Algorithms test real time | Summary note and Code | | | |  | | | |  |
| 10 | Research/learn how to use Unity and signal |  | | | |  |
| 11 |  |  | | | |  | | | |  |
| 12 | Documentation + Run demo + Fix Bug | Draft Report #1 | | | |  | | | |  |
| 13 | Draft Report #2 | | | |  | | | |  |
| 14 | Draft Report #3 | | | |  | | | |  |
| 15 | Final Demo and Submission | Final Report, GitHub, Presentation | | | |  | | | |  |

**Student’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Advisor’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**To do list**

**1. Research**

**2. ยืมของ**

**3. Experiment design – Evocation paradigm - MI**

**4. Signal preprocessing – decrease noise**

**5. Feature extraction**

**6. Classification – Training Algorithms**

**7. Experiment- Algorithms test real time**

**8. Research + learn how to use Unity and imerge signal**

**9. Test and fix bugs**