TPT3101 Final Year Project (FYP1) Meeting Log
Trimester 1, 2022/23 (Trimester ID:2210)

Meeting Date: 22/12/2022	**Meeting No.:** 4
Meeting Mode: Physical	
Project ID: 2078	**Project Type:** Research-based
Project Title : Satellite Image Segmentation using Vision Transformer	
Student ID : 1201302740	**Student Name:** Muhammad Haziq Faiz Bin Mohd Ripin
Student Programme and Specialisation: B.C.S (Hons) Data Science	
Supervisor Name: Dr. Loh Yuen Peng	**Co-Supervisor Name:** (if applicable)
Collaborating Company: (if applicable)	**Company Supervisor Name:** (if applicable)

1. WORK DONE
[Please write the details of the work done, after the last meeting]

Tasks: Problem Formulation and Project Planning / Background Study or Literature Review / Requirement Analysis or Theoretical Framework / Design or Research Methodology / Prototype Development or Proof of Concept / Draft Report Completion
(Please strike out the tasks, which are not applicable for the work done, after the last meeting)

Details (in point form):

- Finished the Gantt Chart and flowchart for Chapter 4.
- Trained SegFormer on Vaihingen Dataset using HuggingFace api
- Discovered GeoSeg https://github.com/WangLibo1995/GeoSeg. GeoSeg is an open-source semantic segmentation toolbox based on PyTorch, pytorch lightning and timm. This makes it easier to build and train my model because I don't need to learn frameworks like timm and mmsegmentation.
- Clean and split LoveDA dataset.
- Narrow down the architectures to 3 : UNetFormer, DC-Swin and BANet.

2. WORK TO BE DONE

[Please write the details of the work to be done, before the next meeting]

Tasks: Problem Formulation and Project Planning / Background Study or Literature Review / Requirement Analysis or Theoretical Framework / Design or Research Methodology / Prototype Development or Proof of Concept/ Draft Report Completion
(Please strike out the tasks, which are not applicable for the work to be done, before the next meeting)

Details (in point form):

- Run a baseline model of UNetFormer, DC-Swin and BANet using GeoSeg with pre-trained weights on the LoveDA dataset.
- Get the performance on the baseline model.
- Start working on chapter 4 and 5 of the report.
- Figure out how to run the models on google colab or paperspace as my computer is inadequate for the training.

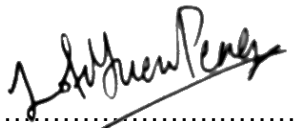
3. PROBLEMS ENCOUNTERED AND SOLUTIONS

[Please write the details of the problems encountered, after the last meeting and provide the solutions / plan for the solutions]

- Had a hard time understanding mmsegmentation framework which is required for most semantic segmentation models. Discovered GeoSeg which abstracted all the hard parts.

4. COMMENTS (Supervisor / Co-Supervisor / Company Supervisor)

Take note that the evaluation needs to be done using some standard measurements to compare with the groundtruth and get quantitative values, not just observation.



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Supervisor's Signature Student's Signature

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Co-Supervisor's Signature Company Supervisor's Signature
(if applicable) **(if applicable)**

IMPORTANT NOTES TO STUDENTS:

1. Items 1 – 3 are to be completed by the students prior to the meeting. Item 4 is to be completed by the supervisor / co-supervisor / company supervisor.

2. Student has to upload the soft copies of the meeting logs in Google Classroom and also attach them along with interim (FYP1) report.
   Minimum requirement is SIX Meeting Logs (Period: Week 3 to Week 13). Students can have fortnightly meetings with the supervisor.

3. Log sheets provide the basis for evaluating the General Effort (Project Management, Attitude, and Technical Competency) of the student, by the supervisor and also for checking the attendance requirement of the student, by the FYP Committee.

   This also provide the student with feedback from the supervisor / co-supervisor / company supervisor on the tasks done and provide the plan for the upcoming tasks. This can provide the motivation for the student to give consistent and efficient effort throughout the period of FYP.

4. Student who fails to meet the minimum requirement (six nos.) of log sheets will not be allowed to submit FYP report.