

ML in Medicine

Tran Giang Son, tran-giang.son@usth.edu.vn

ICT Department, USTH

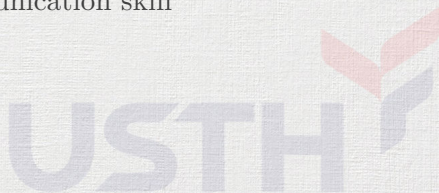


Course Introduction



Goals

- Describe medicine concepts
- Explain how machine learning learning can be applied to healthcare
- Build machine learning models for specific healthcare problems
- Improve team work and communication skill



Content

- General introduction
- Medical imaging
- Ultra sound
- X-ray
- Computed Tomography
- Magnetic Resonance Imaging
- Medical image fusion
- Project presentation



Format

- 3 ECTS = 36 hours
- Prerequisites: Python Programming, Introduction to Deep Learning
- Environment: Linux/Mac
- Assessment:
 - Attendance / Report / Presentation
 - 10% / 40% / 50%



Course Assessment



Attendance

- Minimum 70% (26h) is required
- Less:
 - No final exam
 - Have to retake
- Why?
 - Slide is not for you to learn yourself
 - For illustrating concepts of the lecture



Assignment

- What? Python Programs
 - Understand what you learnt
 - Show your ability to apply it to new problems
 - In **BOTH** Notebook AND .py files
- Individual work
- Don't copy paste. I have checker tools.
- Should be well organized and well written

I will, in fact, claim that the difference between a bad programmer and a good one is whether he considers his code or his data structures more important.

Bad programmers worry about the code. Good programmers worry about data structures and their relationships.

Assignment

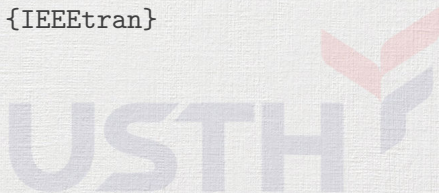
- Where?
 - <https://github.com/SonTG/mlmed2024>
- Bonus point with a leaderboard?



Report

- Write in the academic paper format
- Use L^AT_EX!!!!111!!111
 - Not docx OR ODT
 - Not Google Docs
- Two columns, 6 pages

```
\documentclass[conference]{IEEEtran}
```



Projects

- 50% of the overall score
- Project: 5 students/group
 - Presentation: 15 mins/group
 - QA: 15 mins/group
- In the conference presentation format



Project Topics

- to be defined...

