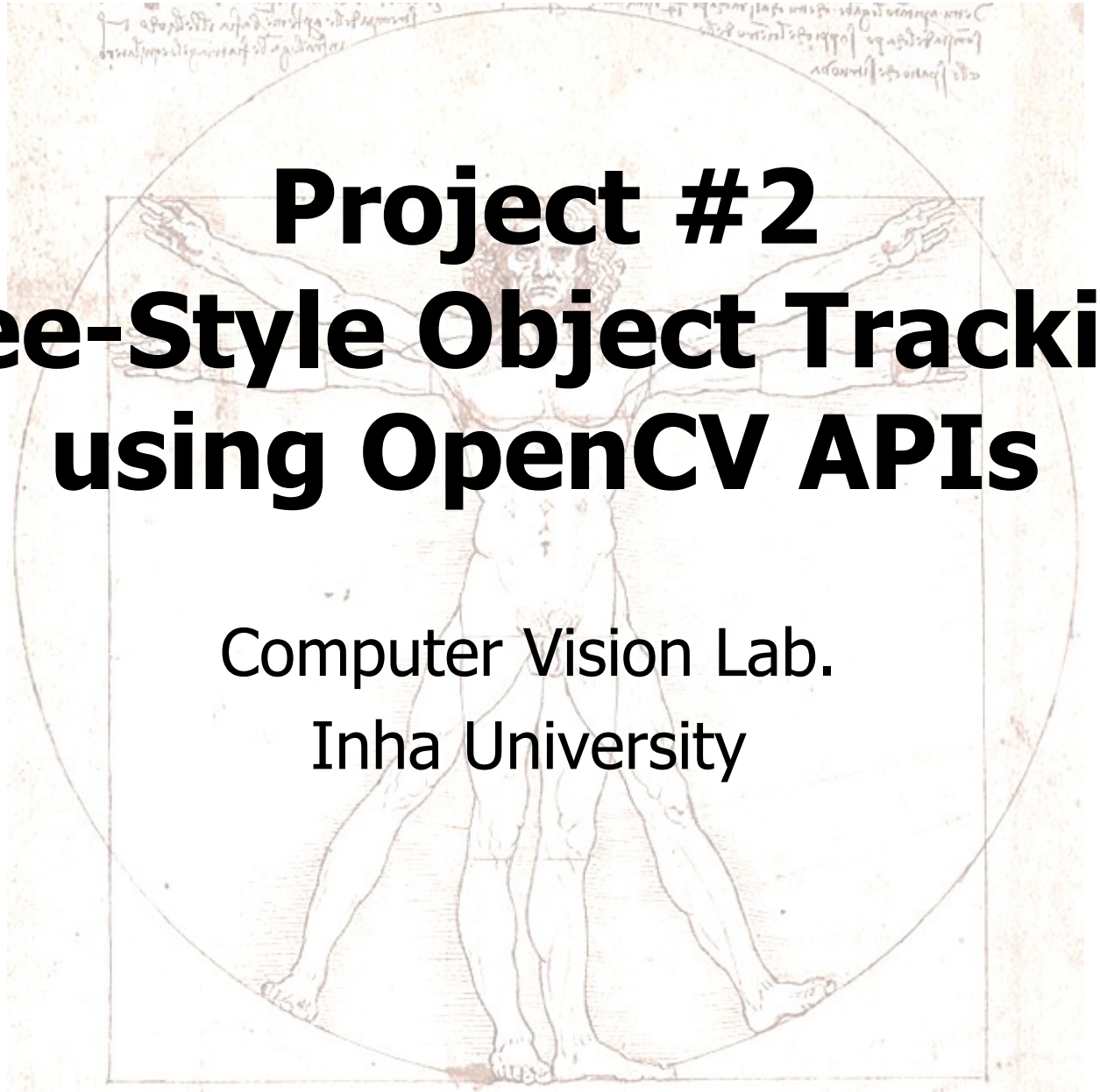

Project #2
Free-Style Object Tracking using OpenCV APIs

Computer Vision Lab.
Inha University

Overview

❖ Objectives

- To collective work individually to choose and re-producing an open-sourced object tracking algorithm using OpenCV APIs.

❖ Goals

- The re-produced algorithm MUST work given a video as input for tracking & a real-time video as input for tracking
- Performance evaluation of the implemented algorithm

❖ Tools

- Own Laptop/PC installed with OpenCV-Python (or) you can use online Google Colab to code

Procedure

- Choosing an object tracking algorithm
  - As an undergraduate student, you are not going to create your own tracking algorithm. Instead, work towards in choosing one algorithm from plenty of OpenCV APIs.
  - Once chosen, you will stick that method of object tracking (For Example: KCF tracker, BOOSTING tracker, TLD tracker and so on)..
  - OpenCV APIs will lead to plenty of sample code examples that you can directly use to input your own videos/real-time stream.
  - Every student will choose one algorithm and realize the sample codes to work with their customized inputs.

Implementation

- Week 13 will be the implementation session
  - This session is lead offline and students will involve in the implementation procedure stated in the previous slide.
  - Students can also use professional open-sourced platforms such as Google Colab, GitHub etc. for collective code gathering and deploying without installing any OpenCV libraries or Python on your own machine.

Testing & Evaluation

- Week 14 will be the Testing & Evaluation session
  - Evaluation will be done offline (instructor will run your code and examine the performance)
  - The Testing & Evaluation session will be during the week 14

  - Evaluation involves:
    - Real-time deployment performance
    - Video input deployment performance
    - Appropriate documentation of the total procedure.

Documentation Guidelines

- Students MUST make a documentation in the form of a VIDEO JOURNALING
- A (10-min) single video containing the following things:
  - *Explanation about the chosen tracking algorithm*
  - *Walk-through of the code*
  - *Running code with video-input*
  - *Running code with real-time video streaming*
- Make sure to discuss all the above-mentioned things in a video

Submission

- Must be an individual report
  - Save the video in .mp4 format and upload the video to your GitHub account
  - Submit the GitHub link to the I-Class assignment
  - Deadline: 28th November (11:55 PM)