

Computer Vision Practice with Deep Learning



Final Project



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Video: 2025/12/07 23:59

Peer Review: 2025/12/14 23:59

In-person Presentation 2025/12/19 09:10-12:10

Report: 2025/12/19 23:59

Hard Deadline, Late Submission Policy is NOT Applicable

Late → 0 points

- **Information regarding TAICA students' grading policies, submission methods, peer review procedures, in-person presentation, and other details beyond the assignment content should be determined by your institution's teaching assistants or professors. Any questions, please contact them.**

- You can refer to what was taught in class, and brainstorm topics that you are interested in.
- Team-based project with a proof-of-concept implementation of a selected 'top-level' and 'new' (published from 2025 or after) paper, which must be enhanced by the team's own innovations





Prestigious International Conferences (Selected)

Computer Vision

- **CVPR:** IEEE Conference on Computer Vision and Pattern Recognition
- **ICCV:** International Conference on Computer Vision
- **ECCV:** European Conference on Computer Vision

Multimedia

- **ACM MM:** ACM International Conference on Multimedia

Artificial Intelligence

- **AAAI:** Association for the Advancement of Artificial Intelligence
- **IJCAI:** International Joint Conference on Artificial Intelligence

Machine Learning

- **NeurIPS:** Neural Information Processing Systems
- **ICML:** International Conference on Machine Learning
- **ICLR:** International Conference on Learning Representations
- **IJCNN:** International Joint Conference on Neural Networks

- International Journal of Computer Vision
- ACM Transactions on Multimedia Computing
- IEEE Transactions on Pattern Analysis and Machine Intelligence
- IEEE Transactions on Image Processing
- IEEE Transactions on Multimedia
- IEEE Multimedia
- IEEE Transactions on Circuits and Systems for Video Technology
- IEEE Transactions on Knowledge and Data Engineering
- IEEE Transactions on Neural Networks and Learning Systems



Grading

- Video 45% (group-level)
- Report 45% (group-level)
- Peer Review Participation 10% (individual-level)
- The scoring criteria are based on the following four points
 - Relevance to practical applications in computer vision
 - Novelty, reasonableness and effectiveness
 - It's okay to combine various popular models for an interesting task.
 - The presentation, clarity and accuracy of the video and the report.
 - The report must adhere to the IEEE template and properly cite any referenced paper.
 - It is essential to clarify which parts are your own contributions and novelty



Video (45%)

- **Description:**
- 10-15 min, upload to:
 - ❑ NTU students: [link](#) with filename **video_<group-id>.mp4. (only for NTU)**
 - ❑ TALCA students: [link](#) with filename **<school>_video_<group-id>.mp4. (only for TALCA)**
- We'll choose top-6 groups to attend the final in-person presentation (see page 9).
- The video should include the group ID, project title, motivation, related work, methodology, and main experimental results.
- **Deadline for video submission: 2025/12/07 23:59**
- **Grading:** peer review (15%), other criteria (30%)
- **Late submission is forbidden**

Peer Review Participation (10%)

- **Description:**
- Scoring the videos of assigned groups in **individual-level**.
- The review assignment will be announced on NTU COOL (only for NTU students).
- **Deadline for peer review:** 2025/12/14 23:59.
- **Grading:** individual-level, malicious ratings or incomplete submissions will get 0 points.
- **Late submission is forbidden.**

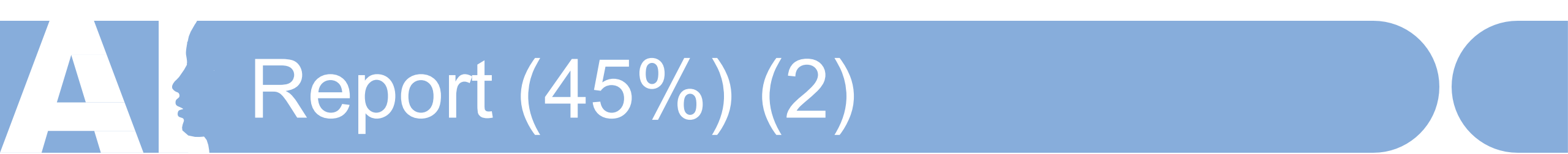


In-person Presentation (bonus)

- **Description** (Only for NTU students):
- We'll choose top-6 groups to participate the in-person presentation after the peer review deadline.
- Whether or not you're presenting, everyone must attend the final class.
- Maximum 20 min for presentation, 5 min for Q&A.
- **Date:** 2025/12/19 09:10-12:10
- **Grading:** The participated groups will get 3-5 bonus on final project.

- **Submission Guidelines:**

- The final report should be submitted in PDF format, adhering to the IEEE template guidelines. Templates can be accessed at: [IEEE Templates](#)
- The report may be written in either Chinese or English.
- Properly cite all relevant sources, or penalties may apply.
- Maximum length: 8 pages. If exceeding the limit, penalties may apply
- Submit to NTU COOL as: **report_<group_id>.pdf**
- Deadline: **2025/12/19 23:59.**
- **Late submission is forbidden.**



Report (45%) (2)

- **Report Requirements**

The report must include the following:

- **Project Overview**
 - Include the project title, motivation, related work, methodology, and experimental results.
- **Contribution Attribution**
 - Clearly distinguish between original contributions and content from exsisting works.
 - Properly cite all external sources to avoid penalties.
- **Team Contribution**
 - Provide a clear breakdown of each team member's contributions.



Examples from past semester

1	https://youtu.be/IRHANbTloHc	2	https://youtu.be/fVnxR00KWXg
3	https://youtu.be/5KLvBVslLn2Y	4	https://youtu.be/iobyrSbSnw8
5	https://youtu.be/UjScxGTpsKY	6	https://youtu.be/KNJzbgOkGfE
7	https://youtu.be/6lrt1_1hK7Q	8	https://youtu.be/Hiy-BhgUHck
9	https://youtu.be/amGEptxfAtk	10	https://youtu.be/X3iv_4rpOhc
11	https://youtu.be/zDTHyz0NDsM	12	https://youtu.be/McuzASdsP0A
13	https://youtu.be/jfhvzJ8sK1Q	14	https://youtu.be/5_c1GgXjdll
15	https://youtu.be/k7EMYaFIQX4	16	https://youtu.be/-TGZnXhtk8w
17	https://youtu.be/wcr9DhyMROY	18	https://youtu.be/mMoV7tKi24E
19	https://youtu.be/7Goswplpdfg	20	https://youtu.be/3-KEQ4Z2okU
21	https://youtu.be/uKCO-36Q6RU	22	https://youtu.be/KUqHZBE-uAw

AI

The letters 'AI' are in a large, white, sans-serif font. To the right of the 'I' is a white silhouette of a human head in profile, facing right. The background is a solid blue color.

Any Question

(only for NTU students)
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