

Timeline:

T1: Report group member and selected topics to TA: Feb 1st

T2: Submit a brief description of your selected topic (maximum 1 page): Feb 27th

T3: Submit group presentation slide (Please control the number of displays based on the 20-minute time limit.): March 25th

T4: Submit a group project report (maximum 8 pages:2400 to 4000 words): Apr 24th

T5: Group presentation: starting from March 27th, schedule is by drawing on Feb 20th

Each group has about 20mins + 5minQA

Candidate Topics (only decide one topic):

1. CNN-related Application

1.1 Image/Video Processing/Generation

1.2 Object Detection and Recognition

...

2. RNN/Transformer-related Application

2.1 Machine Translation

2.2 Language Modeling

2.3 Time-series Data (audio/finance data) Processing/Generation

...

4. Advancing Training Techniques in Specific Applications

4.1 Optimization algorithm and Regularization techniques

If you have any questions about deciding on the topics, feel free to contact us.

The main part of the report:

For example:

1.Introduction

2.problem statement/description

3.proposed approach

4.performance evaluation

5.discussion

6.conclusion

Notes:

When selecting a project topic for the "Foundation of Artificial Intelligence" course, consider **Personal Interests**. Let your personal passions guide your project choice. Whether it's a professional field like computer vision, healthcare, or finance, or a personal hobby like gaming or photography, there's likely an AI application waiting to be explored. Ensure that the topic is interesting to all team members to maintain

motivation and engagement throughout the project. A shared enthusiasm for the topic will lead to better collaboration and a higher-quality project.

Reference: <https://github.com/KalyanM45/AI-Project-Gallery?tab=readme-ov-file>

Project Goal & Deliverables:

The primary goal of this group project is to bridge theoretical knowledge with practical application. You will explore a real-world problem and develop a functional AI solution. This process is designed to deepen your understanding of AI concepts, enhance your proficiency with relevant tools, and cultivate essential project development skills.

Key Deliverables:

1. **A working prototype or demo** that concretely demonstrates your application's functionality (e.g., generated images, prediction outputs, interactive interface).
2. **A final report** documenting methodology and results.
3. **A presentation** to showcase work and findings to peers and instructors.