Title of Your Seminar Report

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Abstract

Summarize the task, the approaches compared, and the main findings and conclusions of the report. Use `\usepackage[review]{cs717report}` for single-blind review. For the camera-ready report, replace `[review]` with `[final]`. Both modes show your author details; only review mode adds line numbers. Replace all instructions and examples before submitting.

1 Introduction

Introduce the task, why it is interesting, and its main challenges. Explain what the report examines and why. The award-winning paper is the entry point into the topic: discuss it and at least one additional paper, usually two. Explain why these papers were selected.

2 Background and Related Work

Explain the background needed to understand the report and the earlier work on which the selected approaches build. Introduce important concepts, notation, and formal problem definitions where needed. Cite the relevant original sources and explain how they connect to the approaches below.

3 Approaches

Use one subsection per paper and replace the placeholder headings with the paper or method names. The citations below are examples; replace them with your selected papers.

3.1 Entry Paper

Introduce the award-winning entry paper [2]. Explain what it proposes, how it works, its main contributions, and its limitations. Describe the important steps and design choices in your own words.

3.2 Second Paper

Introduce another paper on the topic [3]. Explain what it proposes, how it works, its contributions, and its limitations. Make clear how it differs from the entry paper.

3.3 Third Paper

Discuss a third paper [1]: what it proposes, how it works, its contributions, and its limitations relative to the other approaches. Omit this subsection if the report covers two papers in total.

Equations, Figures, and Cross-References

Use `equation` or `align` for displayed mathematics, define every symbol, and explain what the equation means. For example, for N input-target pairs (x_i, y_i), a model f_θ with parameters θ, and a loss function ℓ, the average loss is

$$\mathcal{L}(\theta) = \frac{1}{N} \sum_{i=1}^{N} \ell\big(f_\theta(x_i), y_i\big). \tag{1}$$

Include images with `\includegraphics[width=\linewidth]{figure.pdf}`. Give each figure a caption, cite its source if adapted or reproduced, and explain it in the text. Place `\label{fig:method}` after the caption.

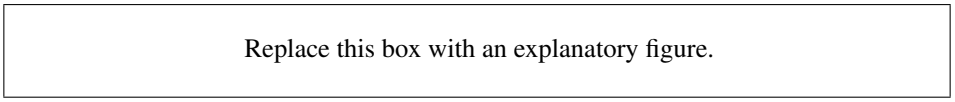

Figure 1: Example figure. Explain what is shown and its main message.

Use `cleveref` for internal references. For example, `\cref{eq:objective}` gives equation (1), and `\Cref{fig:method}` gives Figure 1 at the start of a sentence. These commands also work for sections and tables. Store literature references in `references.bib`. Use `\citep{bar2025navigation}` for a bracketed citation, or `\citet{bar2025navigation}` to name the authors in the text.

4 Experiments and Results

Present a consolidated comparison, or several comparable comparisons, of the approaches discussed. Explain the datasets, metrics, and evaluation settings, then discuss the results and your observations. Compare numbers directly only when the settings are comparable; otherwise explain the differences. Clearly distinguish published results from any experiments you conduct yourself.

5 Discussion

Comparing the approaches Discuss the approaches at a high level. Explain how differences in their methods could account for the results in section 4. Distinguish supported explanations from your own hypotheses.

Limitations and what could come next Discuss the main limitations of the approaches and their evaluation. Explain what remains unresolved and what could be investigated or improved next.

Why did the entry paper receive an award? Explain what made the entry paper stand out from related work at the time. Was it the idea, method, evidence, or wider significance? Use the other papers, including later work where relevant, to support your assessment.

6 Conclusion

Summarize what the report establishes about the topic and the approaches compared. State the main takeaways and answer the questions raised in section 1, without introducing new results.

References

[1] Mahmoud Assran, Quentin Duval, Ishan Misra, Piotr Bojanowski, Pascal Vincent, Michael Rabbat, Yann LeCun, and Nicolas Ballas. Self-supervised learning from images with a joint-embedding predictive architecture. In *2023 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, pages 15619–15629. IEEE, 2023.

[2] Amir Bar, Gaoyue Zhou, Danny Tran, Trevor Darrell, and Yann LeCun. Navigation world models. In *2025 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, pages 15791–15801. IEEE, 2025.

[3] Zahra Kadkhodaie, Florentin Guth, Eero Simoncelli, and Stéphane Mallat. Generalization in diffusion models arises from geometry-adaptive harmonic representations. In B. Kim, Y. Yue, S. Chaudhuri, K. Fragkiadaki, M. Khan, and Y. Sun, editors, *International Conference on Learning Representations*, volume 2024, pages 46543–46567, 2024. URL https://proceedings.iclr.cc/paper_files/paper/2024/file/cbaf319a4712385b5ba8a414808b5713-Paper-Conference.pdf.