FH Salzburg
MultiMediaTechnology

Historical Background and Ethical Aspects of 3D Mesh Reconstruction Diffusion Models

Seminar Paper

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Repository: https://github.com/felixbeer/3d-diffusion-models-paper

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Historical Background and Ethical Aspects of 3D Mesh Reconstruction Diffusion Models

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ABSTRACT

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1 INTRODUCTION

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This paper explores the historical evolution of the rapidly evolving field of 3D mesh reconstruction techniques as well as its ethical implications and applications. Beginning with an overview of the historical development of these techniques, ranging from early methodologies to modern advancements, covering significant milestones that have shaped the entire subject.

The examination of the applications of 3D mesh reconstruction across diverse domains, including development and entertainment, highlights the potential for innovation and advancement. However, it also raises crucial ethical concerns. Privacy considerations, issues of representation and cultural sensitivity, as well as the implications of estimations and hallucinations, highlight the complex ethical landscape surrounding these technologies.

This template is used for seminar papers, bachelor and master theses at MultiMediaTechnology of the Salzburg University of Applied Sciences.

The structure of the template fits many theses works. Seminar papers often require their own structure as it is a literature review on a specific topic and does not present your own work.

Outline the research field and lead towards your research question. How is the investigated issue resolved in related work? What are limitations of these solutions? What is your contribution to find a solution?

2 RELATED WORK

Introduce why this specific related work is important for your own work. Which areas do you cover and why? What do you take as inspiration and what do you do differently/improve upon?

3 HISTORICAL EVOLUTION

3.1 Models

3.2 Comparison

4 APPLICATIONS OF 3D MESH RECONSTRUCTION

4.1 Development

4.2 Entertainment

4.3 Medical

4.4 Other Applications

4.4.1 Cultural Heritage

5 ETHICAL IMPLICATIONS

5.1 Environmental Impact

5.2 Privacy Concerns

5.3 Cultural Sensitivity

5.4 Implications of Estimations and Hallucinations

6 EVALUATION

Describe your methodology. How did you evaluate your work? Why did you choose this methodology? Present results of your evaluation here.

7 DISCUSSION AND FUTURE DIRECTION

Discuss your results to answer your research question. Does your data support you hypotheses? Put your results into perspective by situating it in the research field/related work.

8 CONCLUSION

Summarize your work, outline limitations and future work.

This work has the following word count
(counted by texcount):

```
File: body.tex
Encoding: utf8
Sum count: 325
Words in text: 287
Words in headers: 38
Words outside text (captions, etc.): 0
Number of headers: 19
Number of floats/tables/figures: 0
Number of math inlines: 0
Number of math displayed: 0
Subcounts:
  text+headers+captions (#headers/#floats/#inlines/#displayed)
  197+1+0 (1/0/0/0) Section: Introduction
  33+2+0 (1/0/0/0) Section: Related Work
  0+2+0 (1/0/0/0) Section: Historical Evolution
  0+1+0 (1/0/0/0) Subsection: Models
  0+1+0 (1/0/0/0) Subsection: Comparison
  0+5+0 (1/0/0/0) Section: Applications of 3D Mesh Reconstruction
  0+1+0 (1/0/0/0) Subsection: Development
  0+1+0 (1/0/0/0) Subsection: Entertainment
  0+1+0 (1/0/0/0) Subsection: Medical
  0+4+0 (2/0/0/0) Subsection: Other Applications
  0+2+0 (1/0/0/0) Section: Ethical Implications
  0+2+0 (1/0/0/0) Subsection: Environmental Impact
  0+2+0 (1/0/0/0) Subsection: Privacy Concerns
  0+2+0 (1/0/0/0) Subsection: Cultural Sensitivity
  0+5+0 (1/0/0/0) Subsection: Implications of Estimations and Hallucinati
  21+1+0 (1/0/0/0) Section: Evaluation
  28+4+0 (1/0/0/0) Section: Discussion and Future Direction
  8+1+0 (1/0/0/0) Section: Conclusion
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