

Project name Point Clouds

Henrik Thorbjørn Holmen, Mads Bjørke Vejbæk, William Krøyer Stentzer

Project owner and Technical University of Denmark

Purpose

What is the intent of this project? Why are we doing this project?

We will convert diffusion models from 2D into working with 3D data.

DM is a new technology which already has shown promising results in the 2D spaces. Which opens the door to further examine if this also shows the results in 3D space.

Scope

What does this project contain? What does this project not contain?

Converting 2D DM into working with 3D data.

Optimization of our 3D diffusion model



Success Criteria

What do we need to achieve in order for the project to be successful? How can the Success Criteria be measured?

A working model on 3D data.

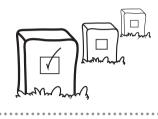
Optimization of 3D DM with same quality using less steps

Milestones

When will we start the project and when is the final deadline?

What are the key milestones and when will they occur?

How can the milestones be measured?



Detailed project plan

Prototype of first DM

Expand prototype

Final DM prototype

Actions

Which activities need to be executed in order to reach a certain milestone?

Cooperation agreement

Research differences in 2D & 3D DMs.

Evaluation

... More to come

Find research questions

PyTorch knowledge

Feedback from supervisors

Problem definition

Dataset analysis (ethics)

Gantt Chart

Coding/1st testing

Project Canvas

Start writing the report

Get approval for the above

Outcome

result? - A book

- A website

A well worked project rapport.

A working DM which works with 3D point clouds

Team

Who are the team members?

What are their roles in the project?

Mads Bjørke Vejbæk

William Krøyer Stentzer

Henrik Thorbjørn Holmen

Stakeholders

Who has an interest in the success of the project? n what way are they involved in the project?

Supervisor: Johan Ziruo Ye Supervisor: Morten Mørup

Users

Vho will benefit from the outcome of the project?

Fellow students

Resources

What resources do we need in the project?

- Financial (money) Human (time, knowledge)

Computational power (HPC) Library (Find It)

LLMs (Microsoft Copilot & OpenAl ChatGPT) Supervisors (Johan Ziruo Ye & Morten Mørup) Constraints

What are the known limitations of the project? Human (time, knowledge, politics)

> Project time is limited Computational complexity Lack of knowledge

Which risks may occur during the project?

low do we treat these risks?

That the DM model we make does not work Other university courses that may affect the time allocation.