

Introduction

History of handling data

- Ancient



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History of handling data

- Ancient
- Medieval



Introduction

History of handling data

- Ancient
- Medieval
- Modern



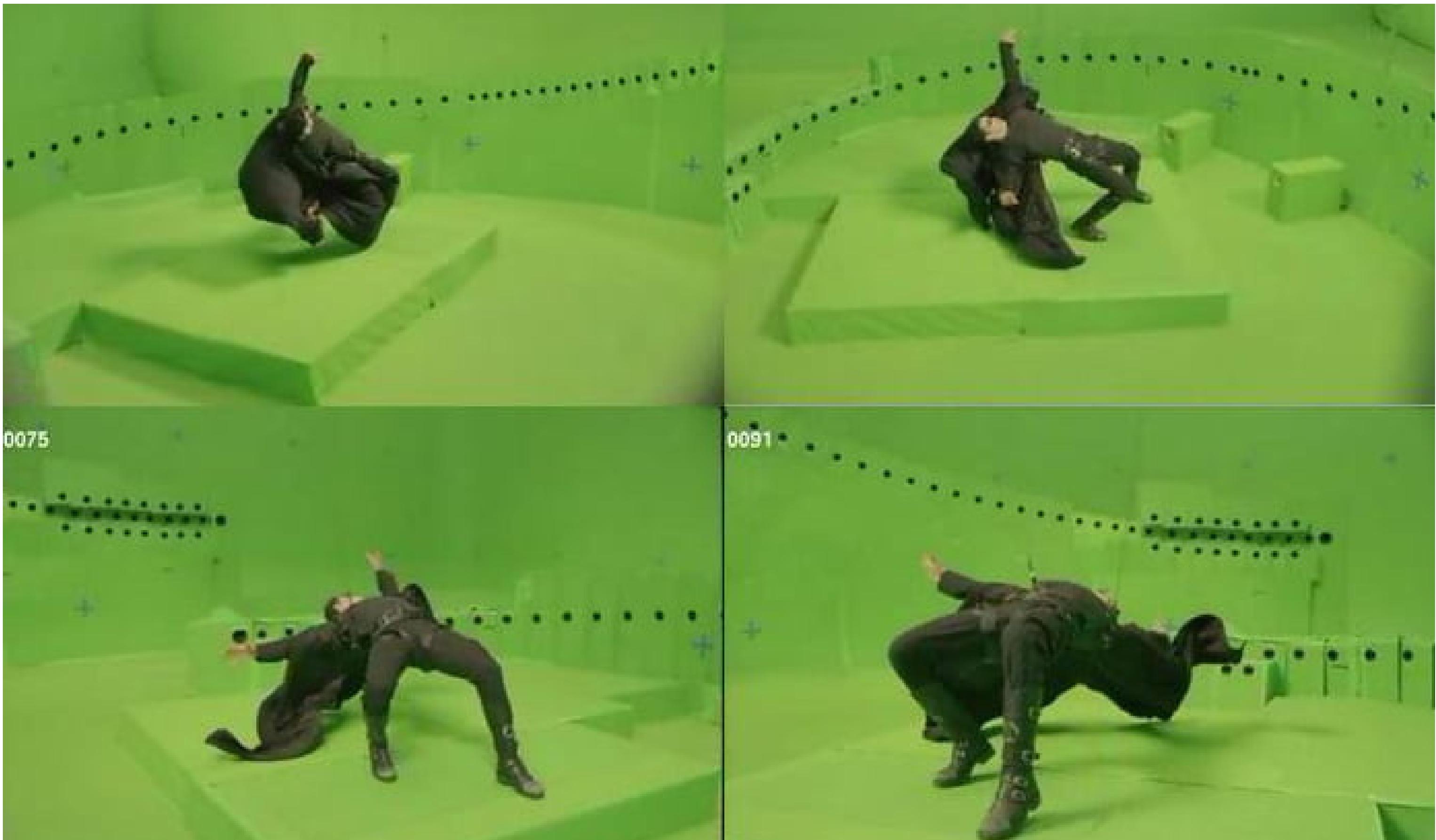
Introduction

History of handling data

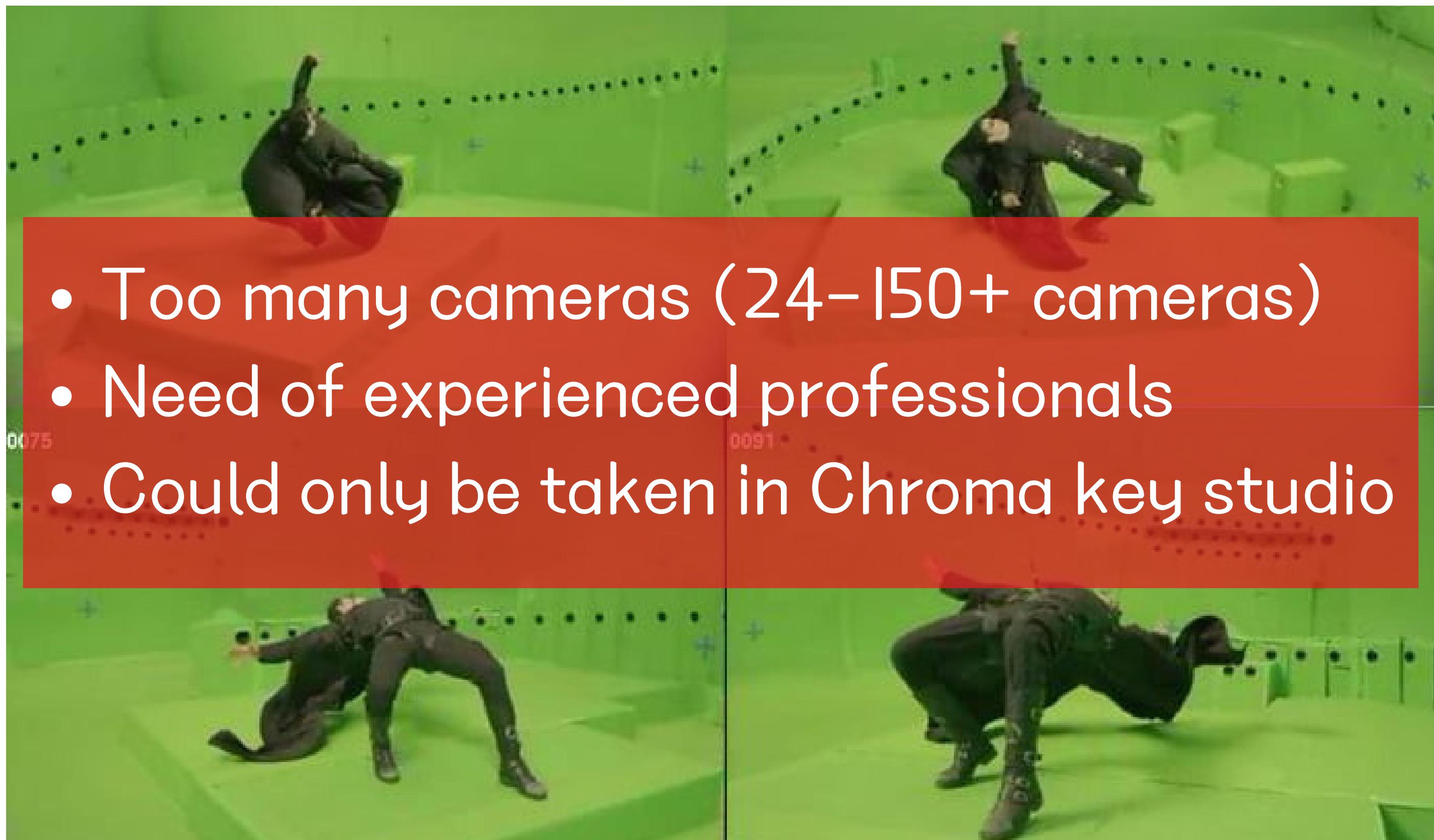
- Ancient
- Medieval
- Modern
- Future



Problems



Problems



Ondahitech : Oncoming data handling technology

Vol.Metric

How to present the bullet-time effect?

A NeRF generates novel views of 3D scenes

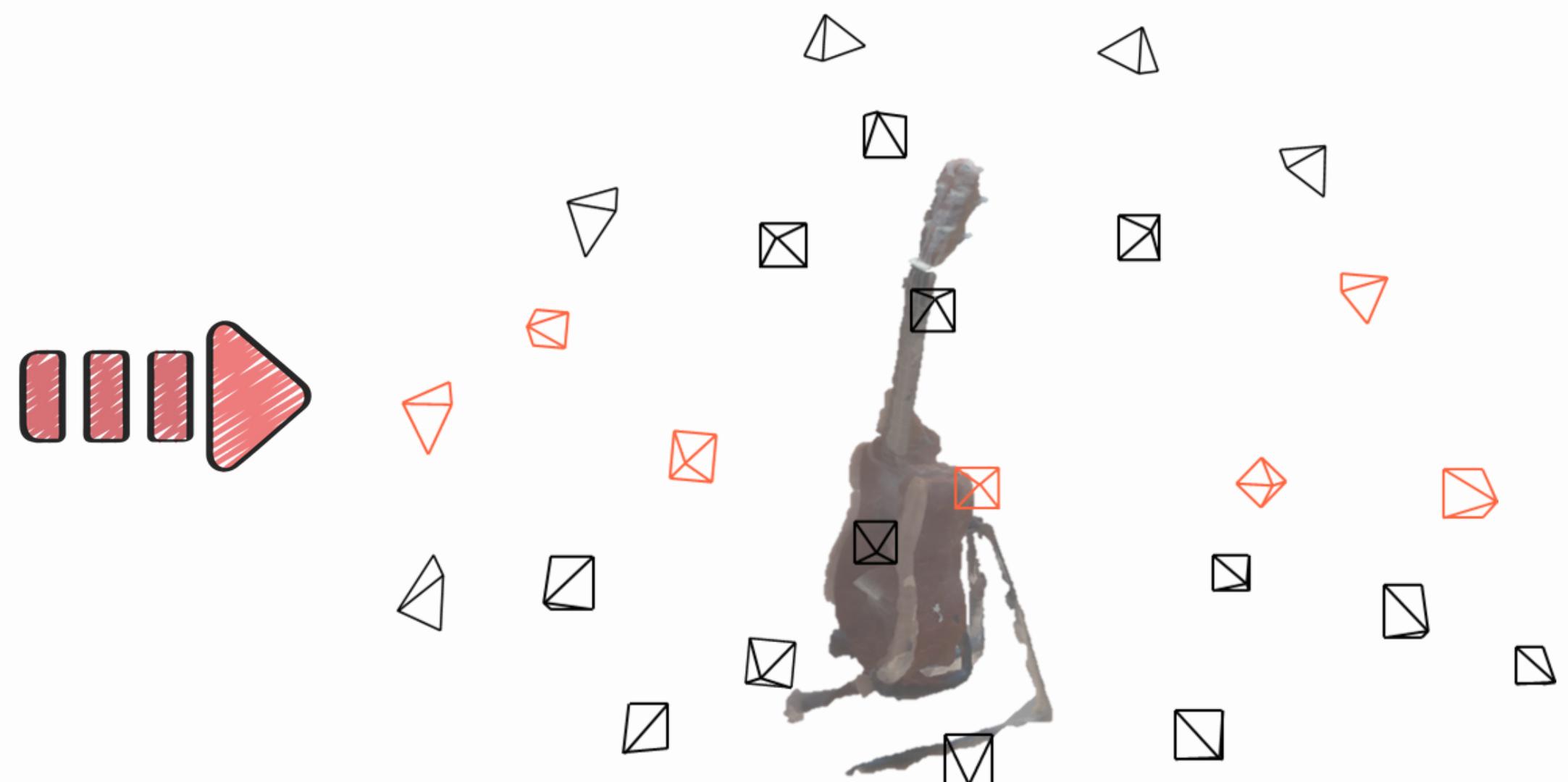
Not 3D rendering (eg. 3D point-cloud, Vertex, etc..)



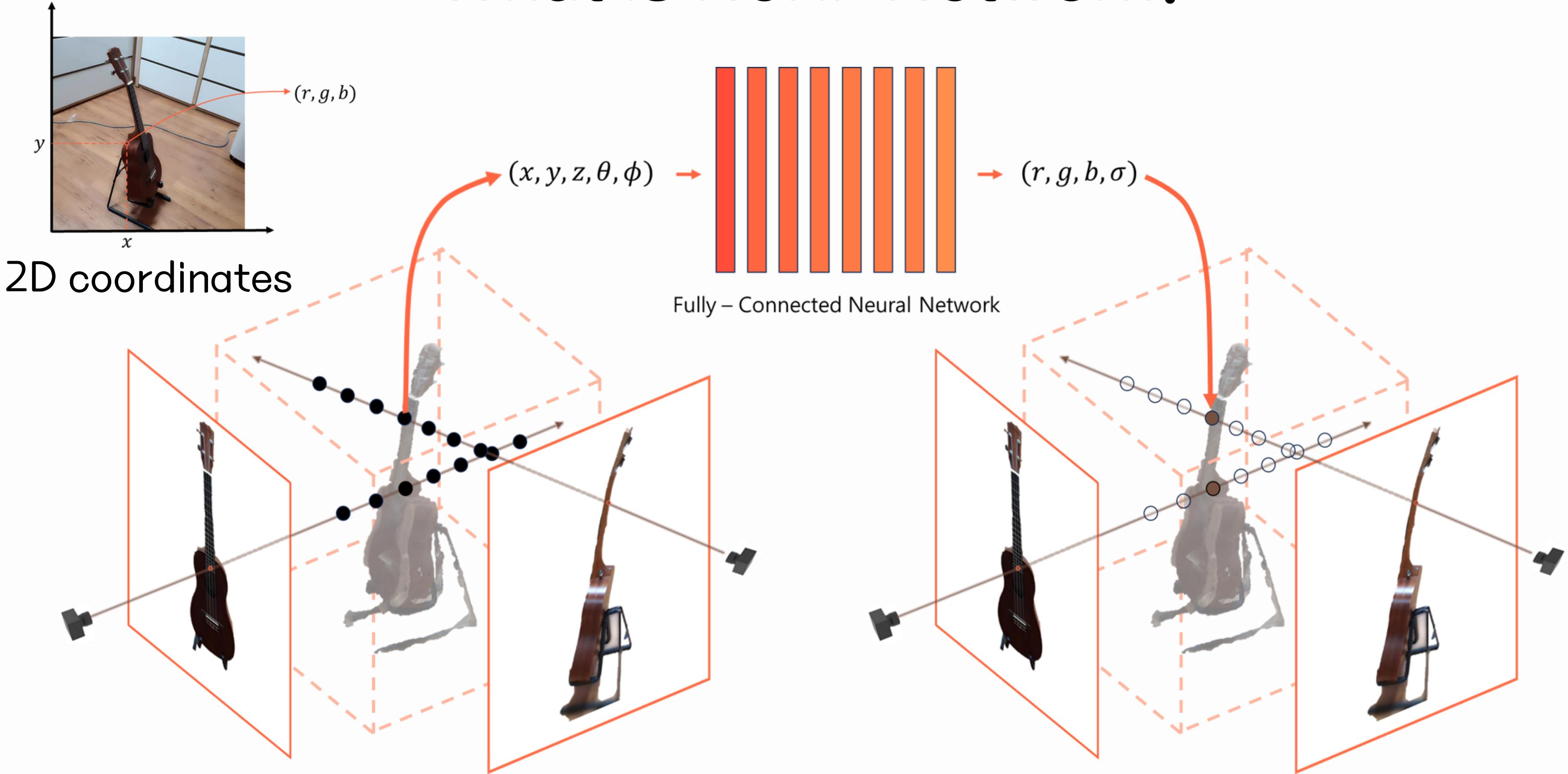
How to present the bullet-time effect?

A NeRF generates novel views of 3D scenes

Not 3D rendering (eg. 3D point-cloud, Vertex, etc..)

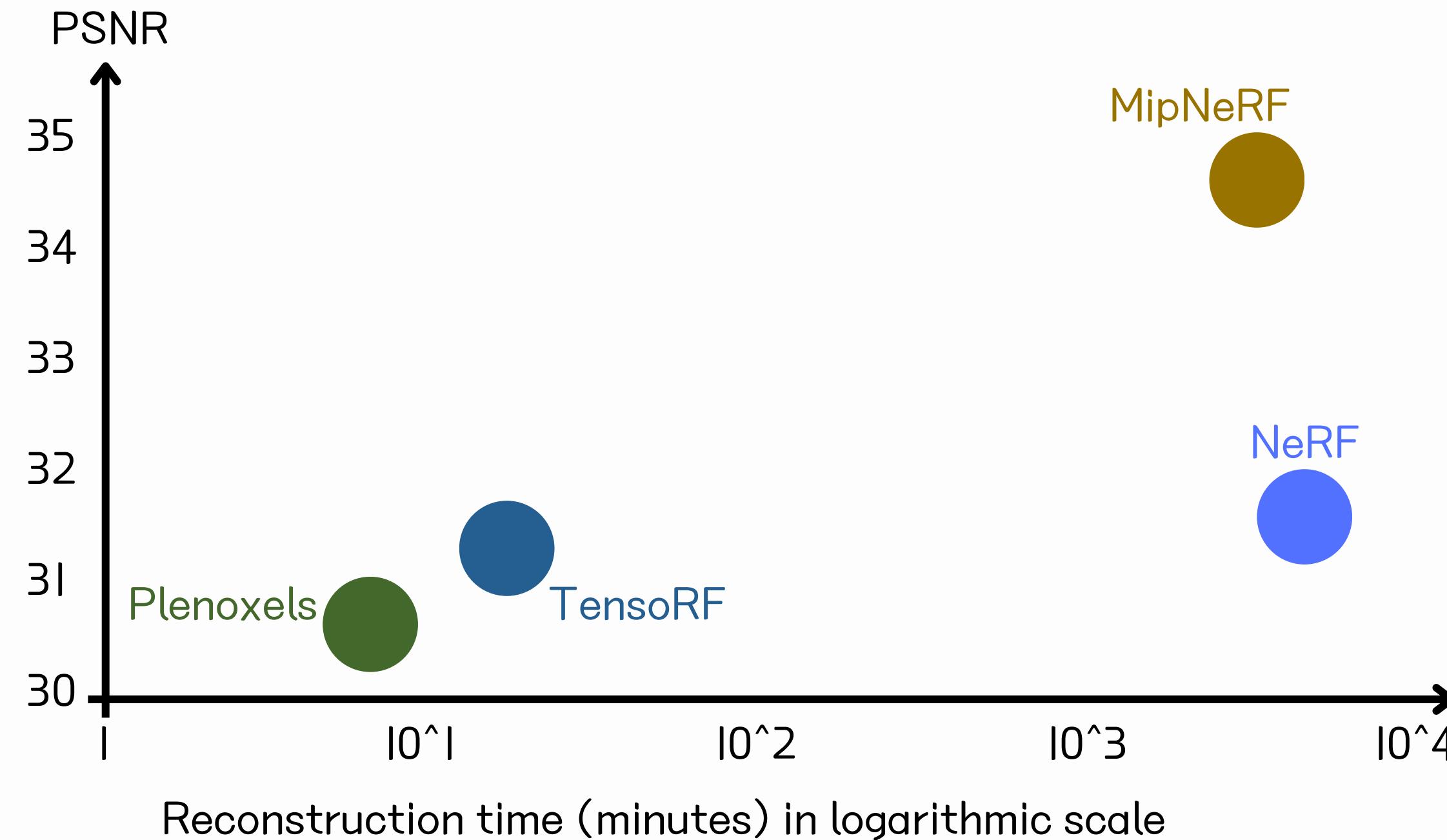


What is NeRF Network?



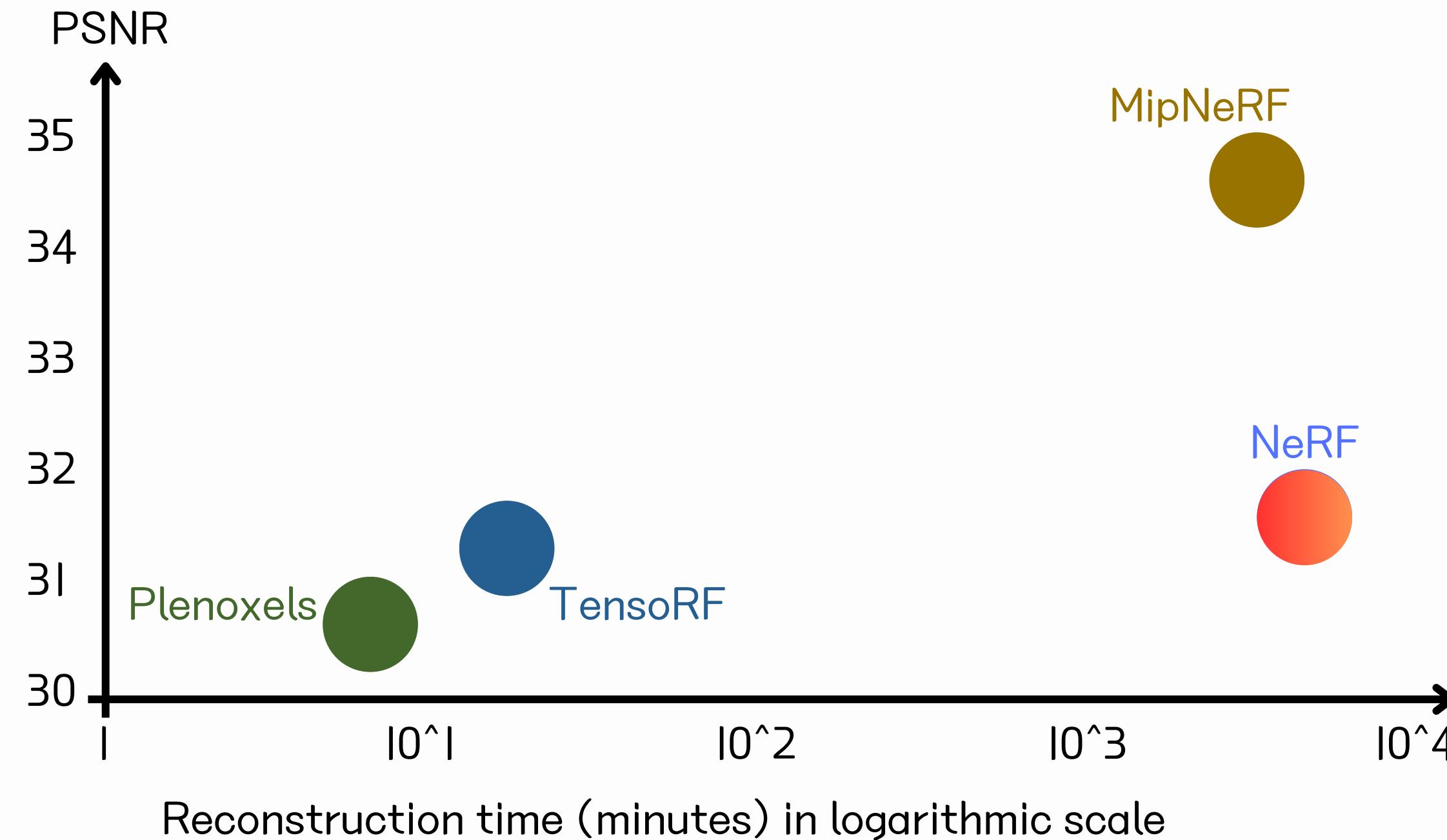
Benchmark of baseline

We need better performance



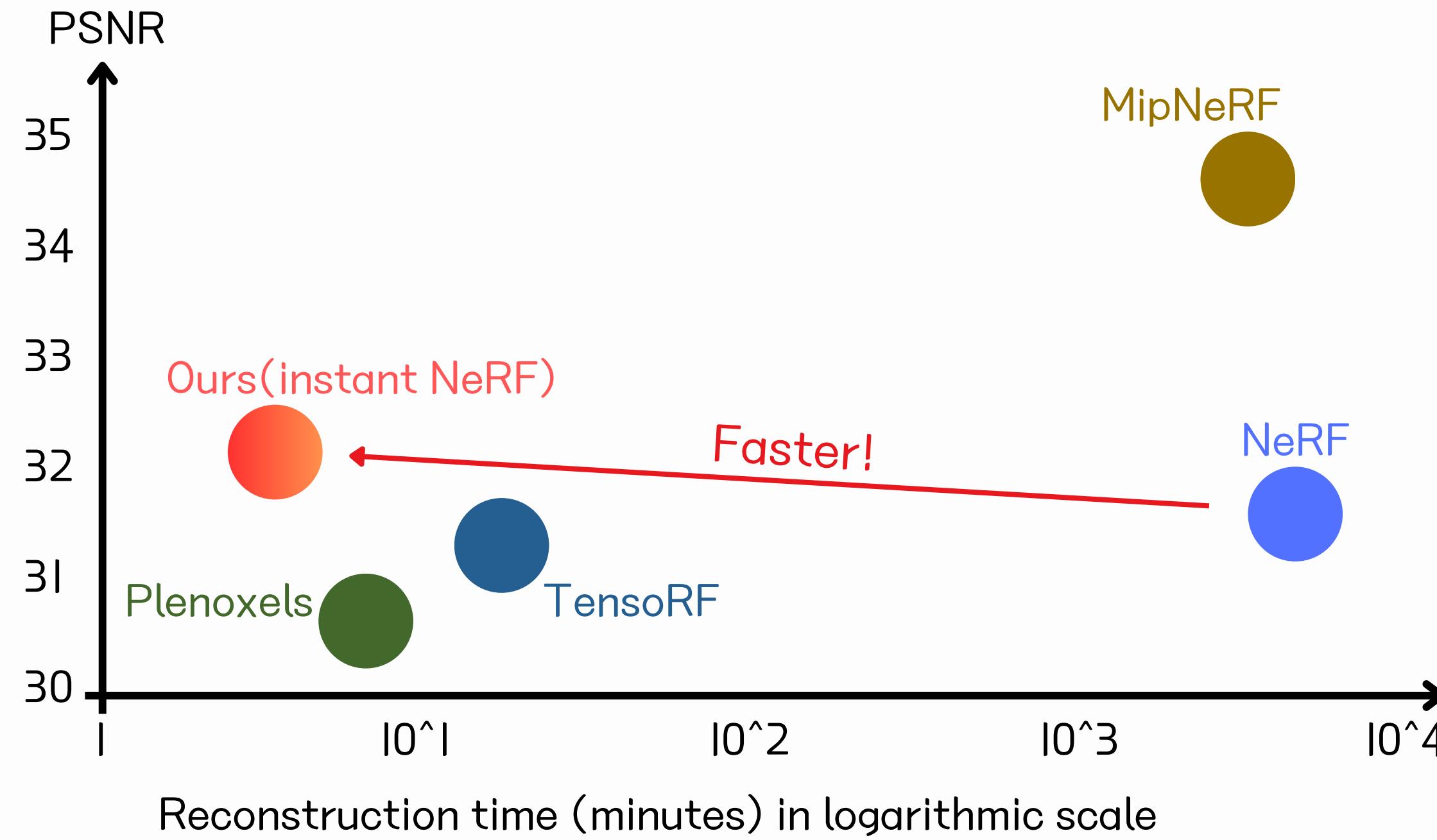
Benchmark of baseline

We need better performance



Benchmark of baseline

We need better performance



A smooth bullet-time effect video



Input images

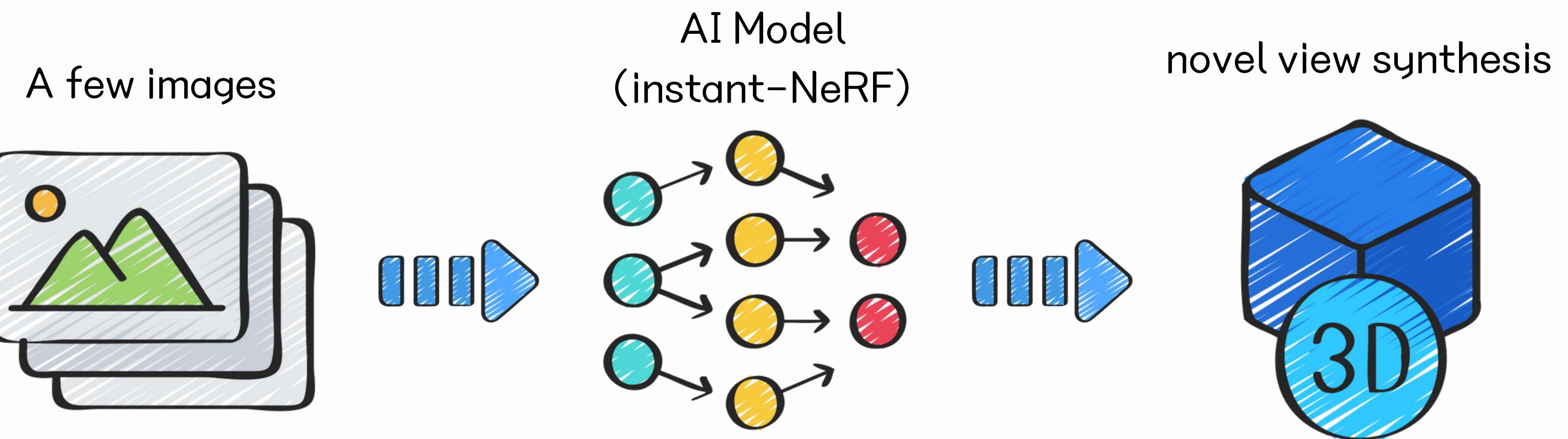


NeRF output

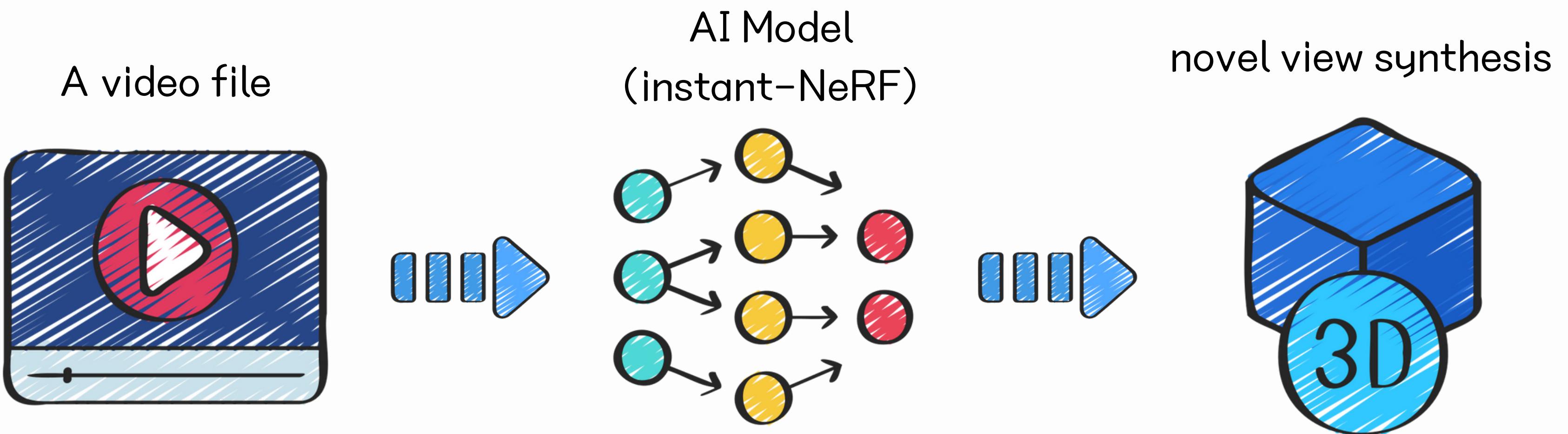
but..

process was not easy

Previous pipeline

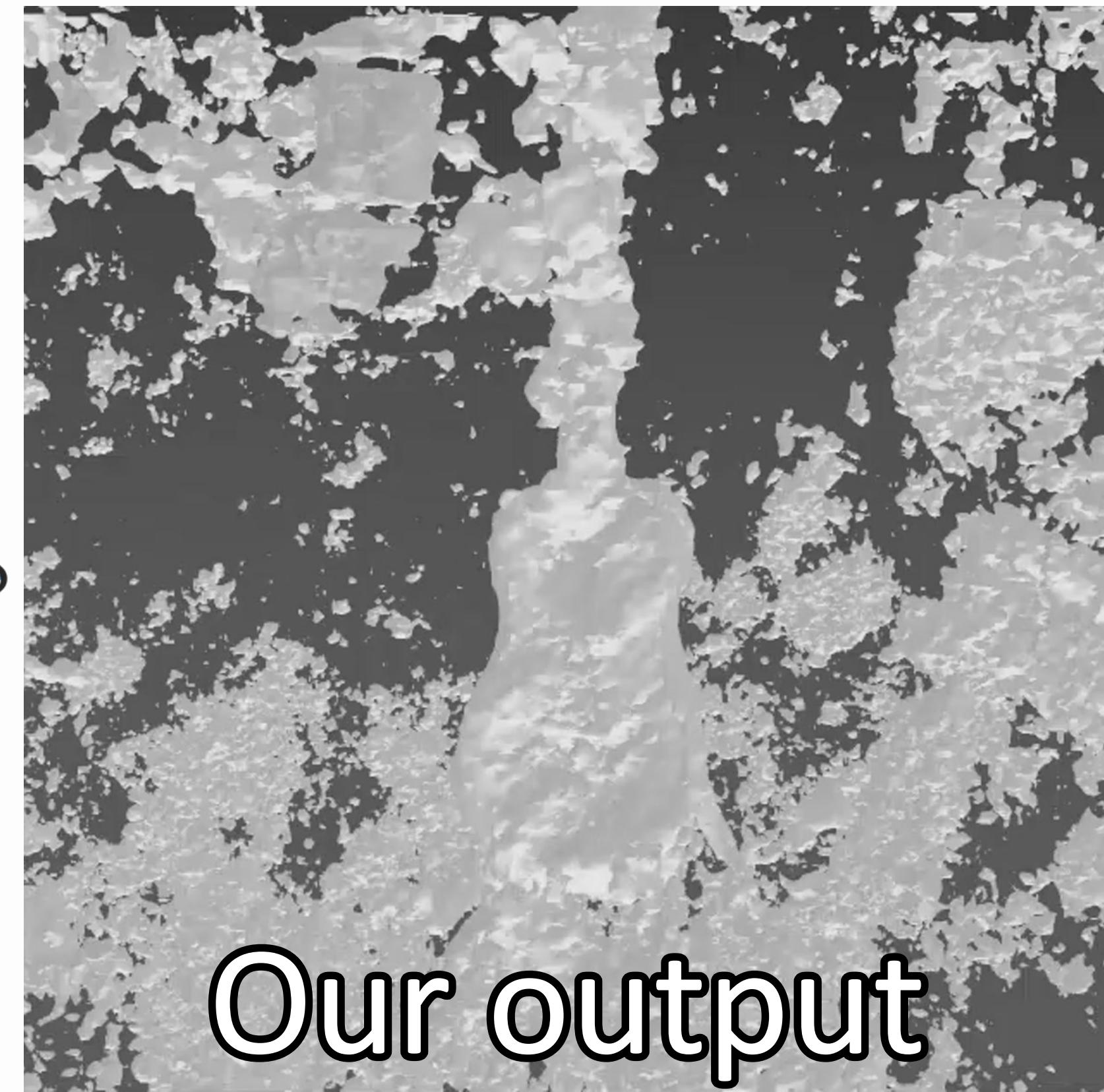


Making the process much easier



Simple 3D novel view couldn't be commercially used

But we found a solution by transforming NeRF output into a mesh file.



Challenge we faced

Complex background affects to NeRF Network

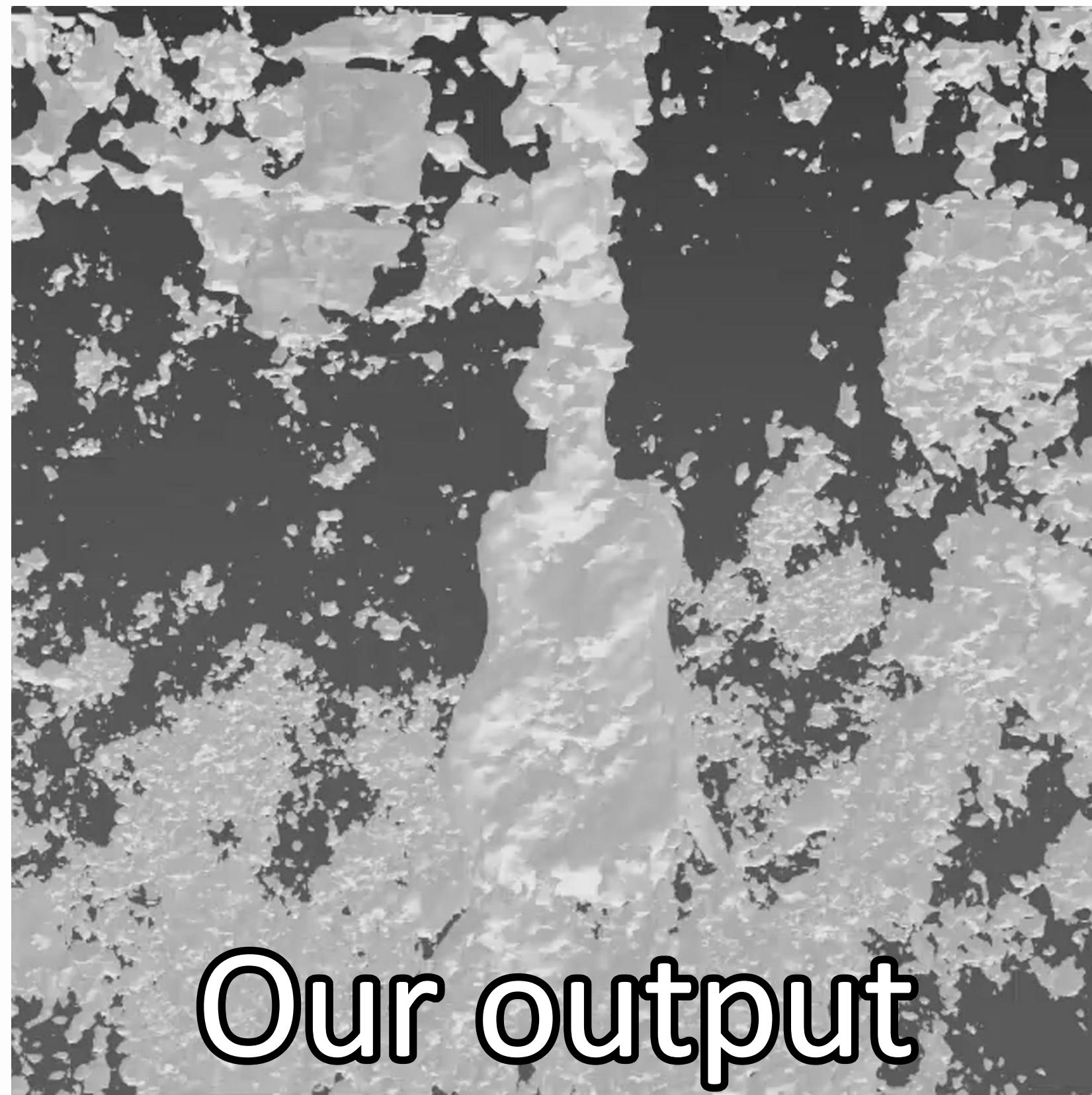
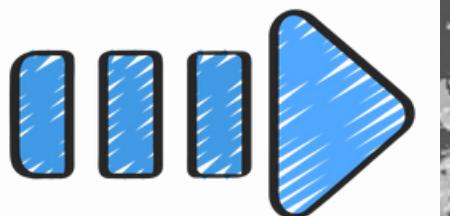


Challenge we faced

Which made mesh file include too many NOISE



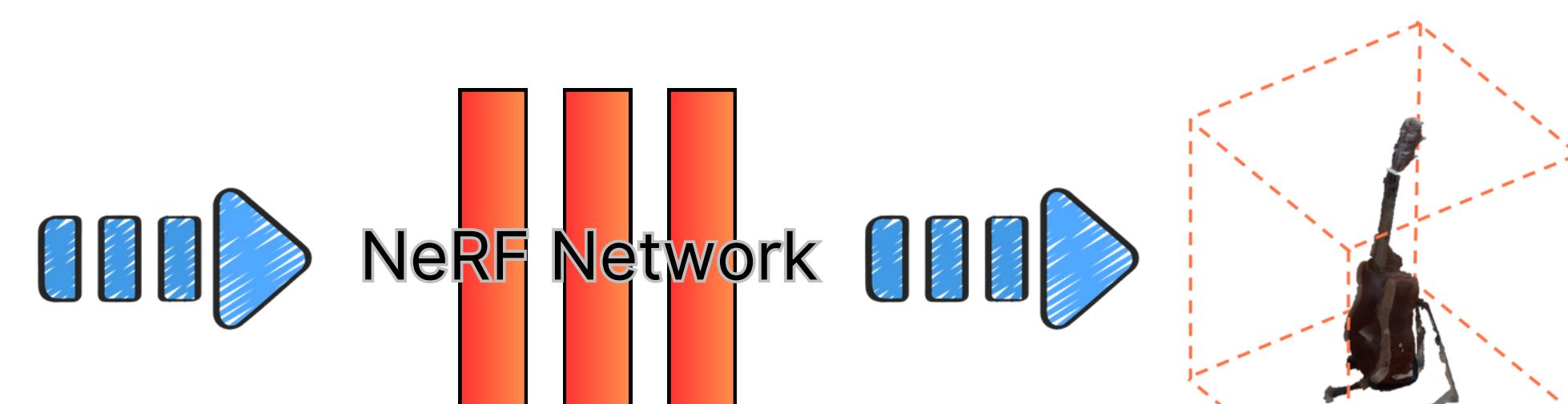
NeRF output



Our output

Solution

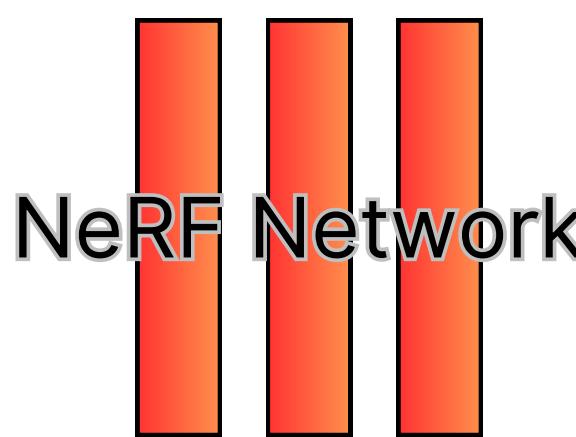
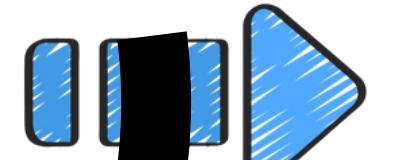
Which made mesh file include too many NOISE



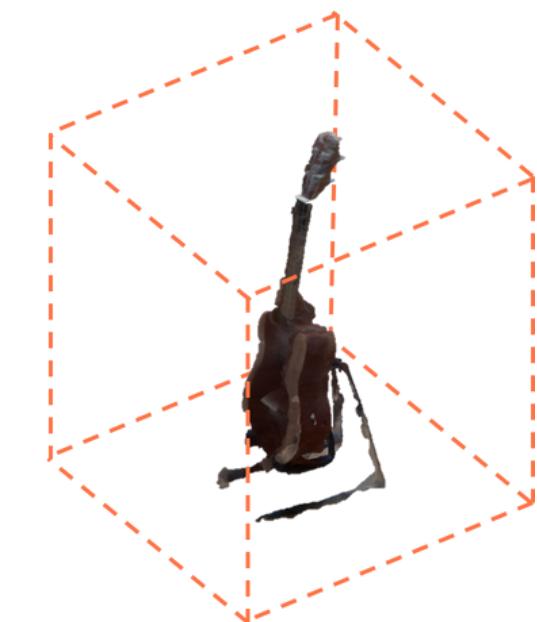
Solution

Which made mesh file include too many NOISE

Preprocessing



Post-processing

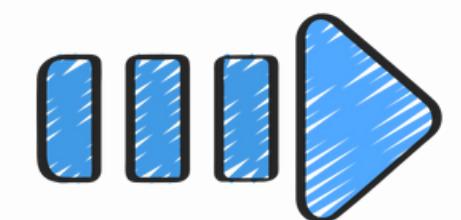


Preprocessing

Blurring background using segmentation network



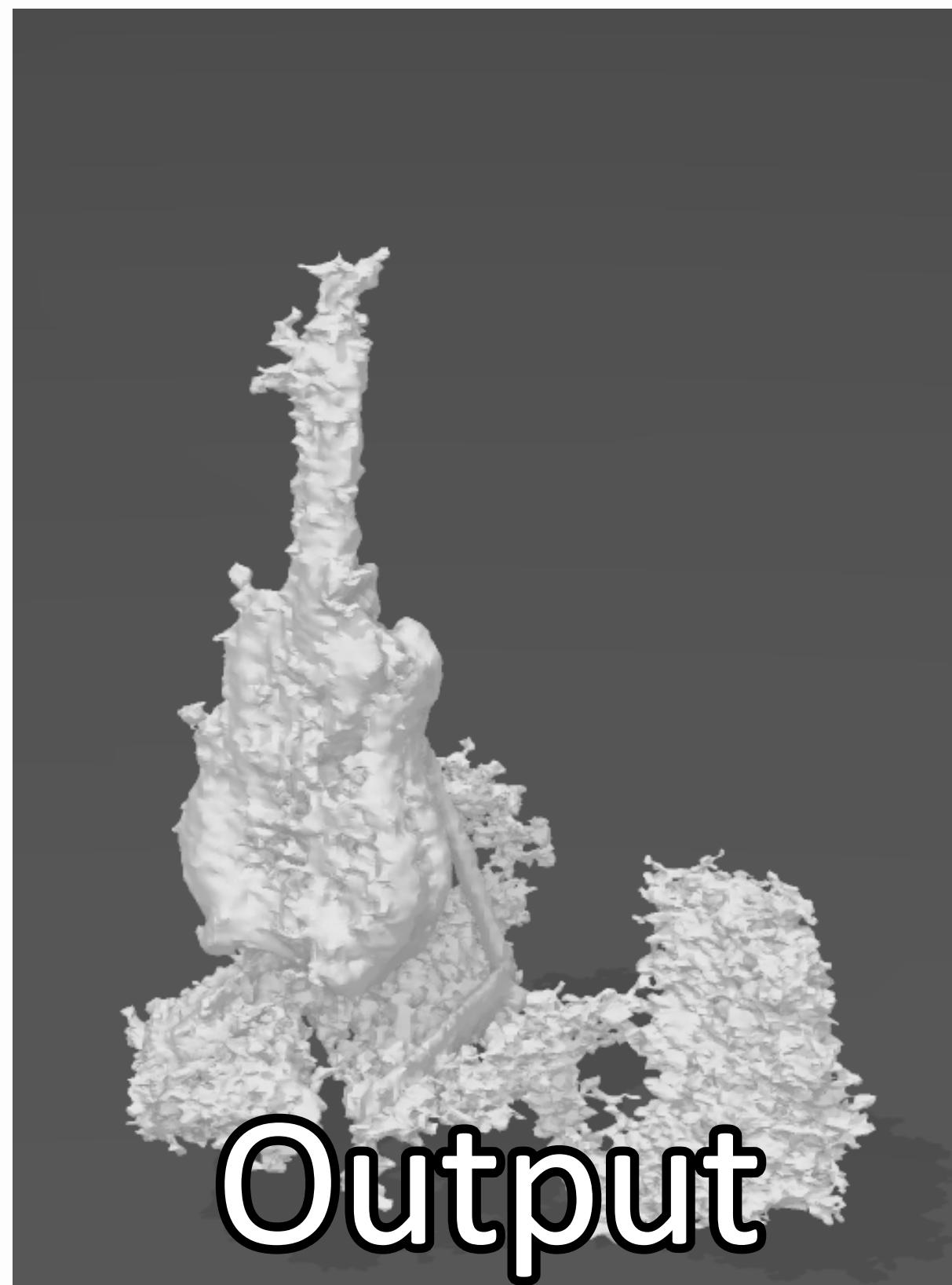
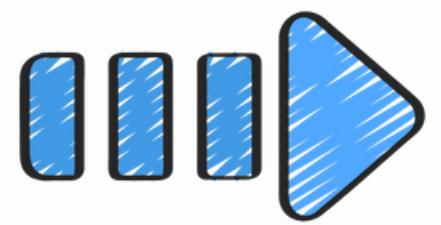
Raw image



U2NET-P Output

Preprocessing

Including incorrect segmentation case

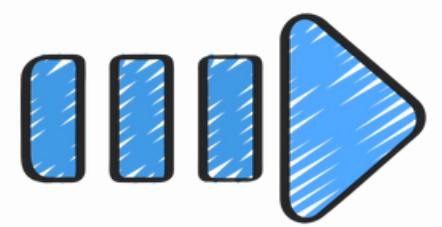
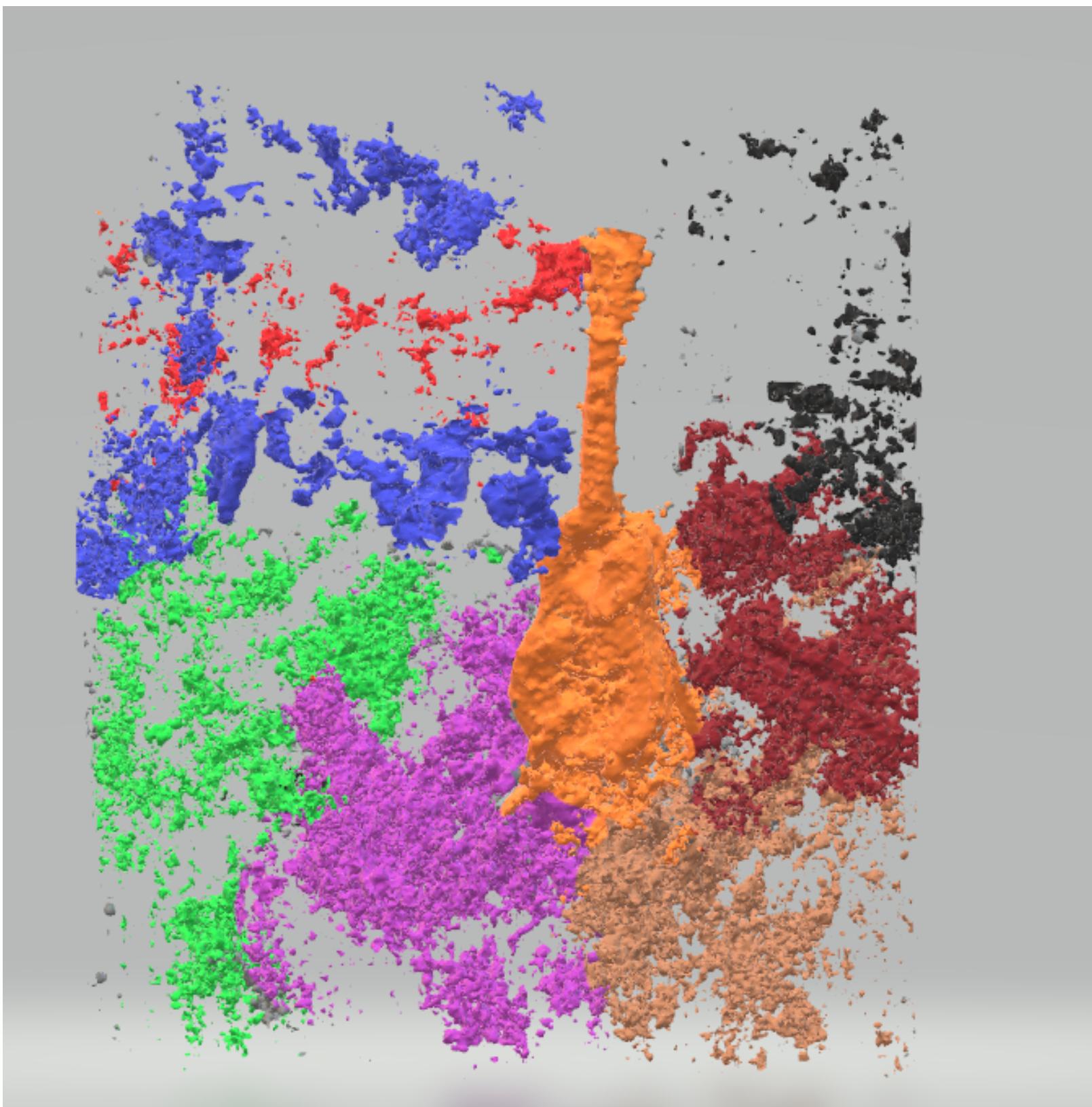


Incorrect case

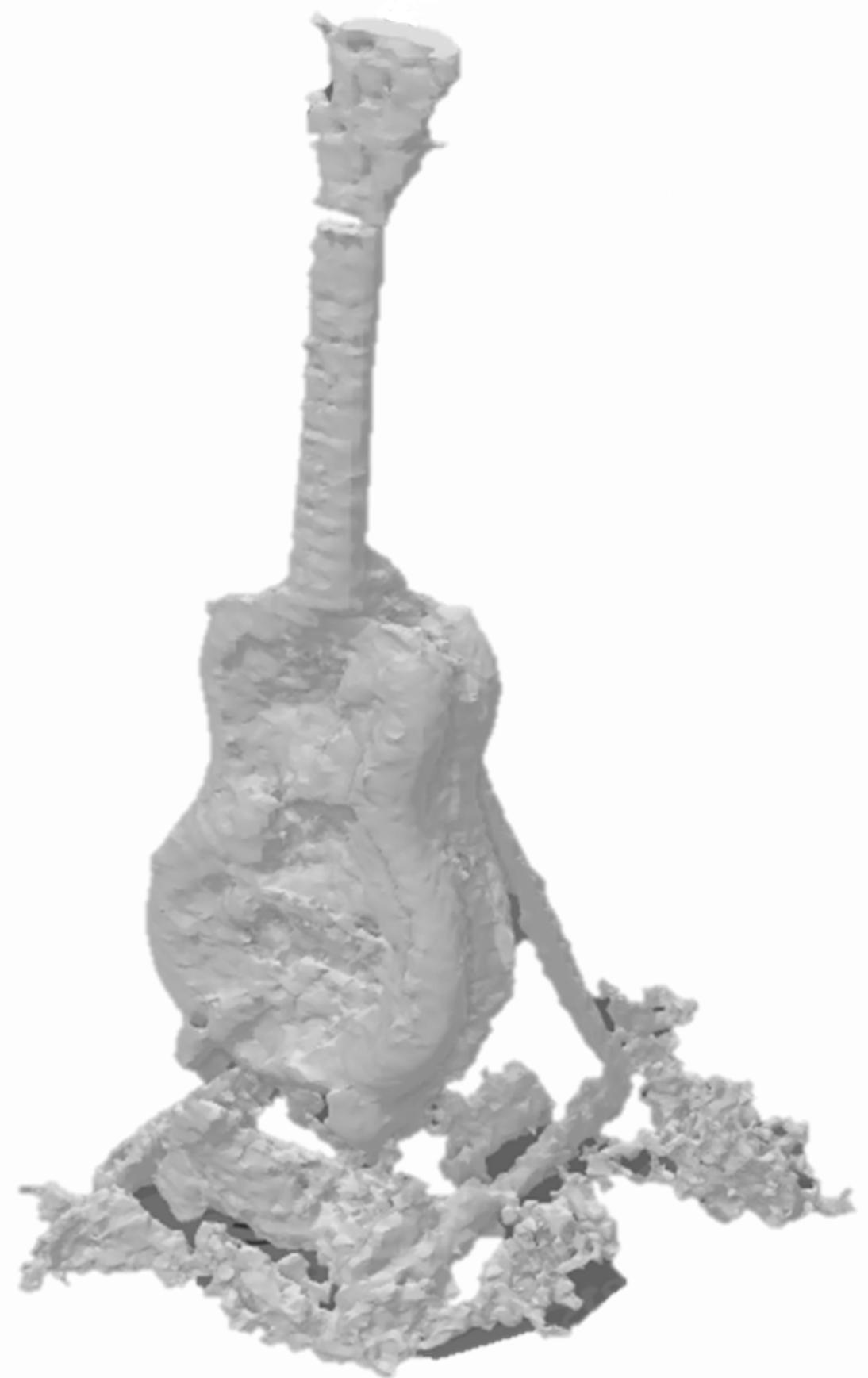
Output

Post-processing

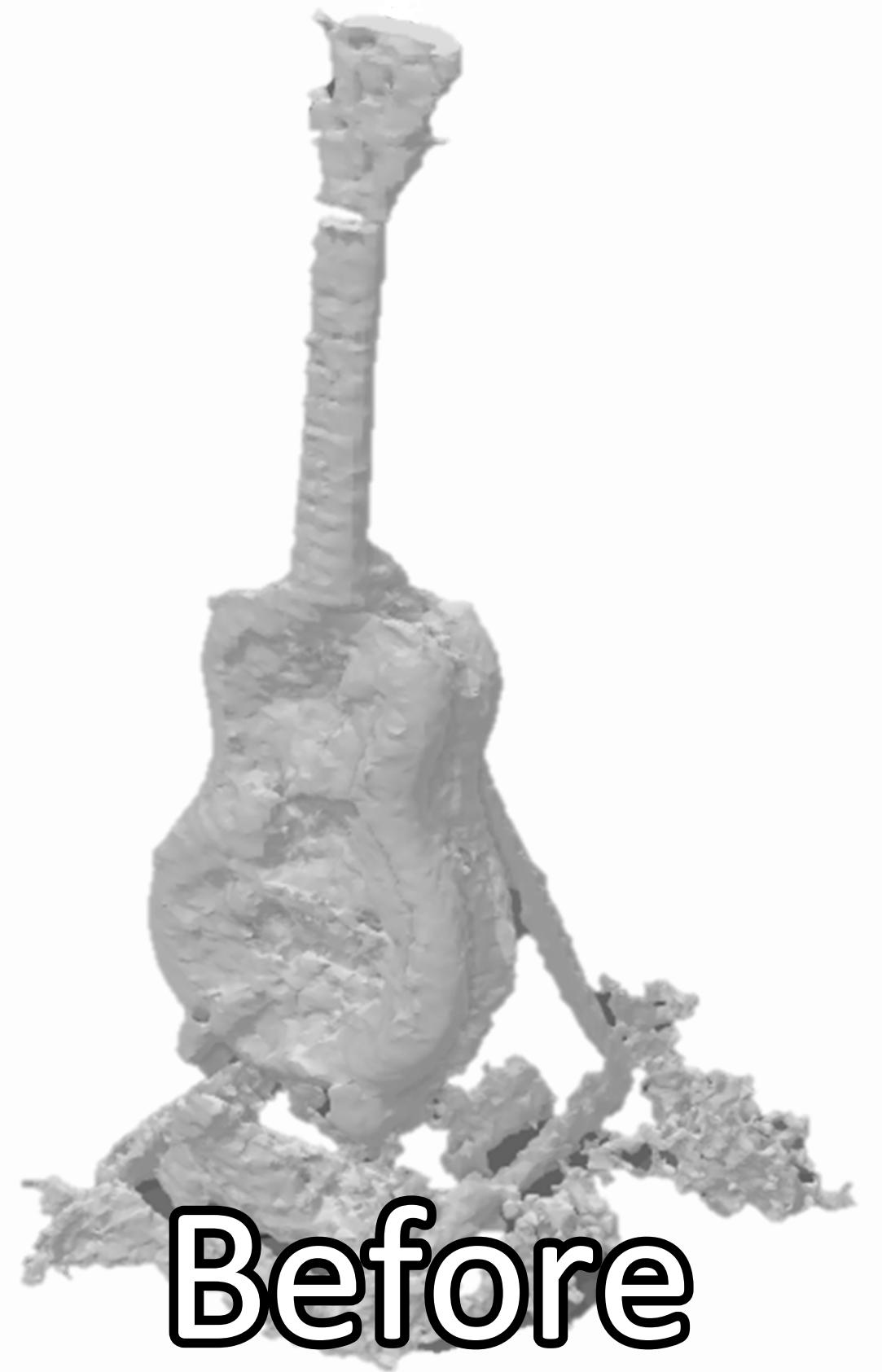
Remove noise in the mesh by keeping only the biggest cluster



Post-processing



Advanced Mesh file

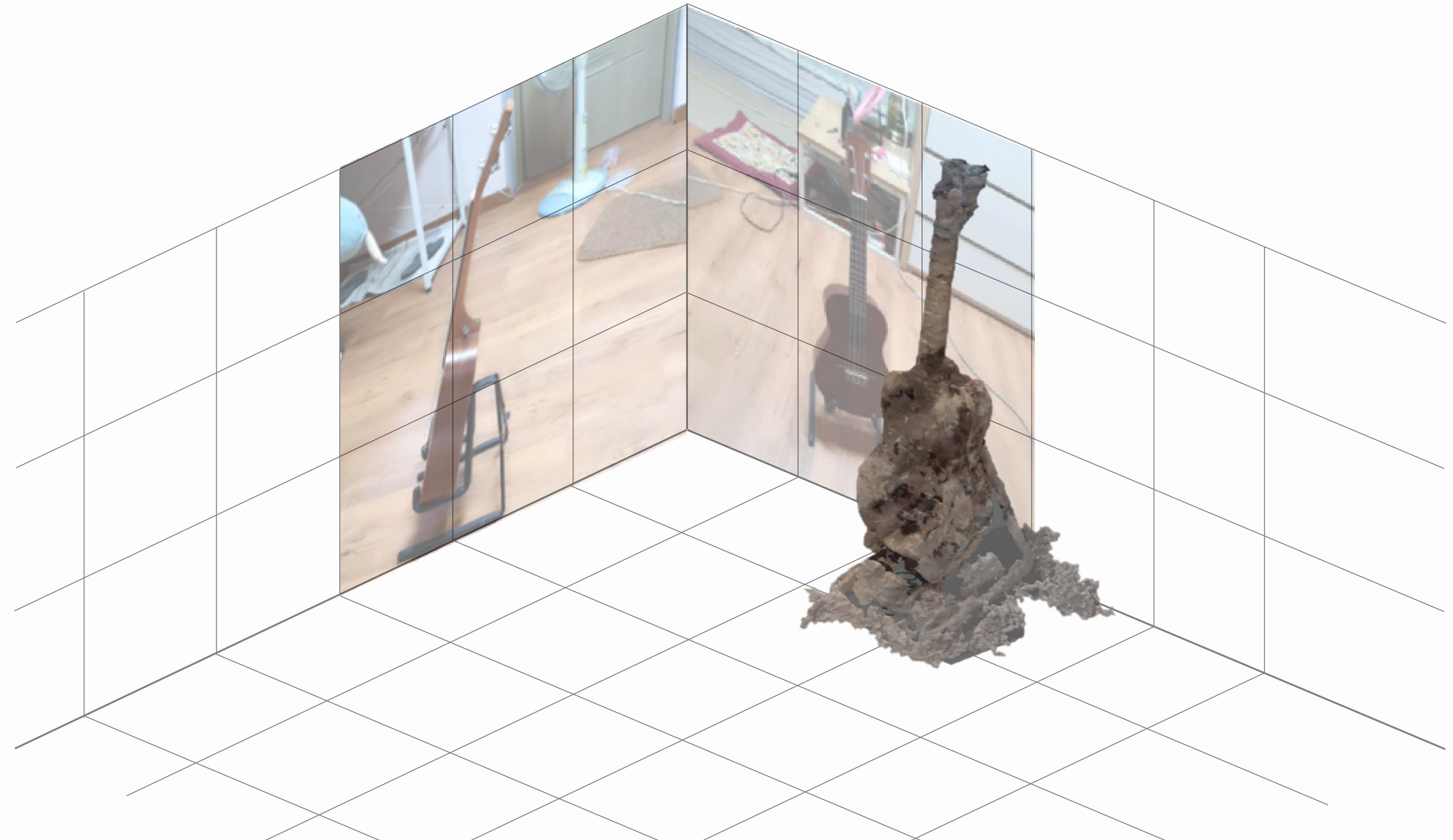


Before

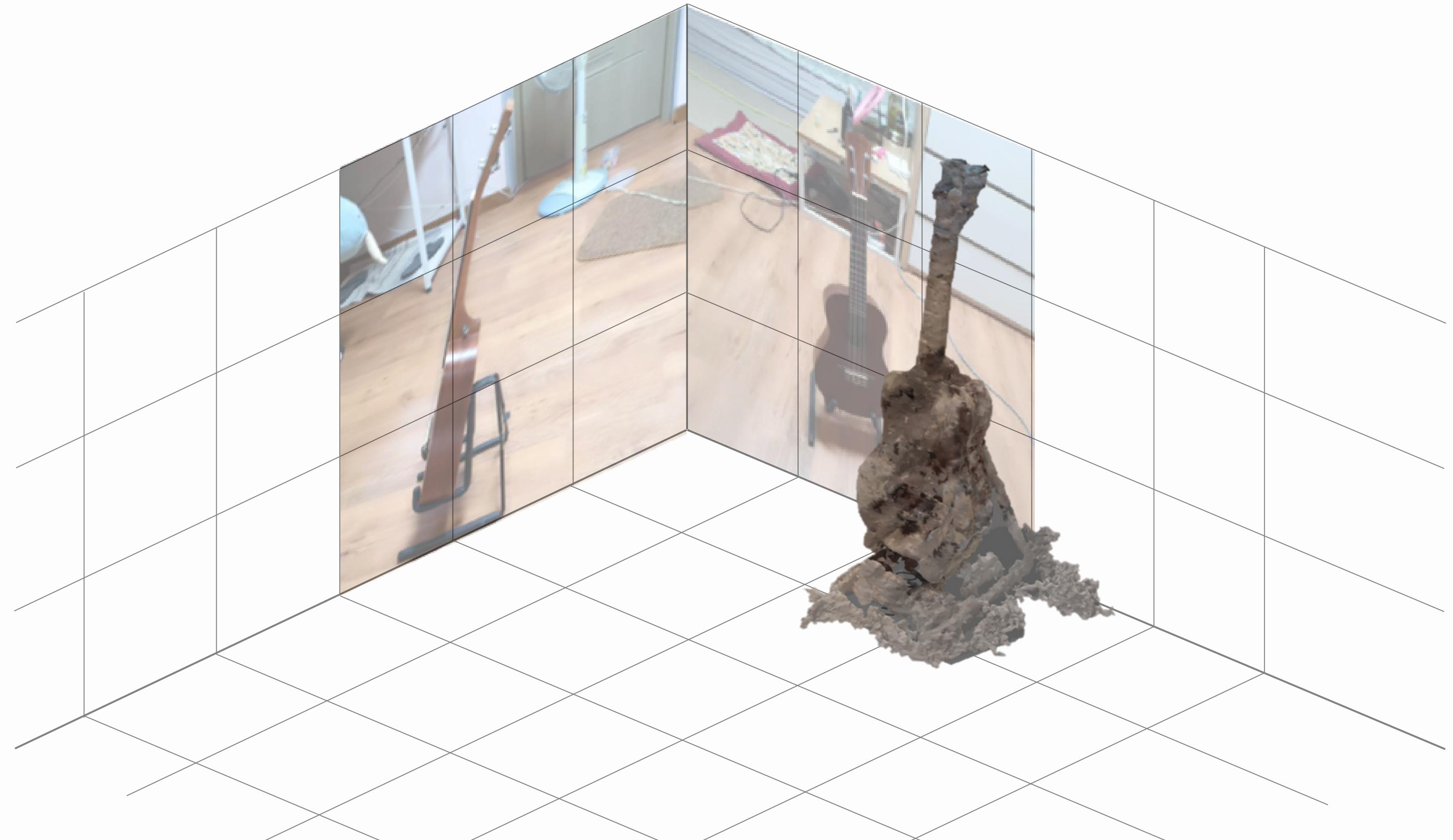


After

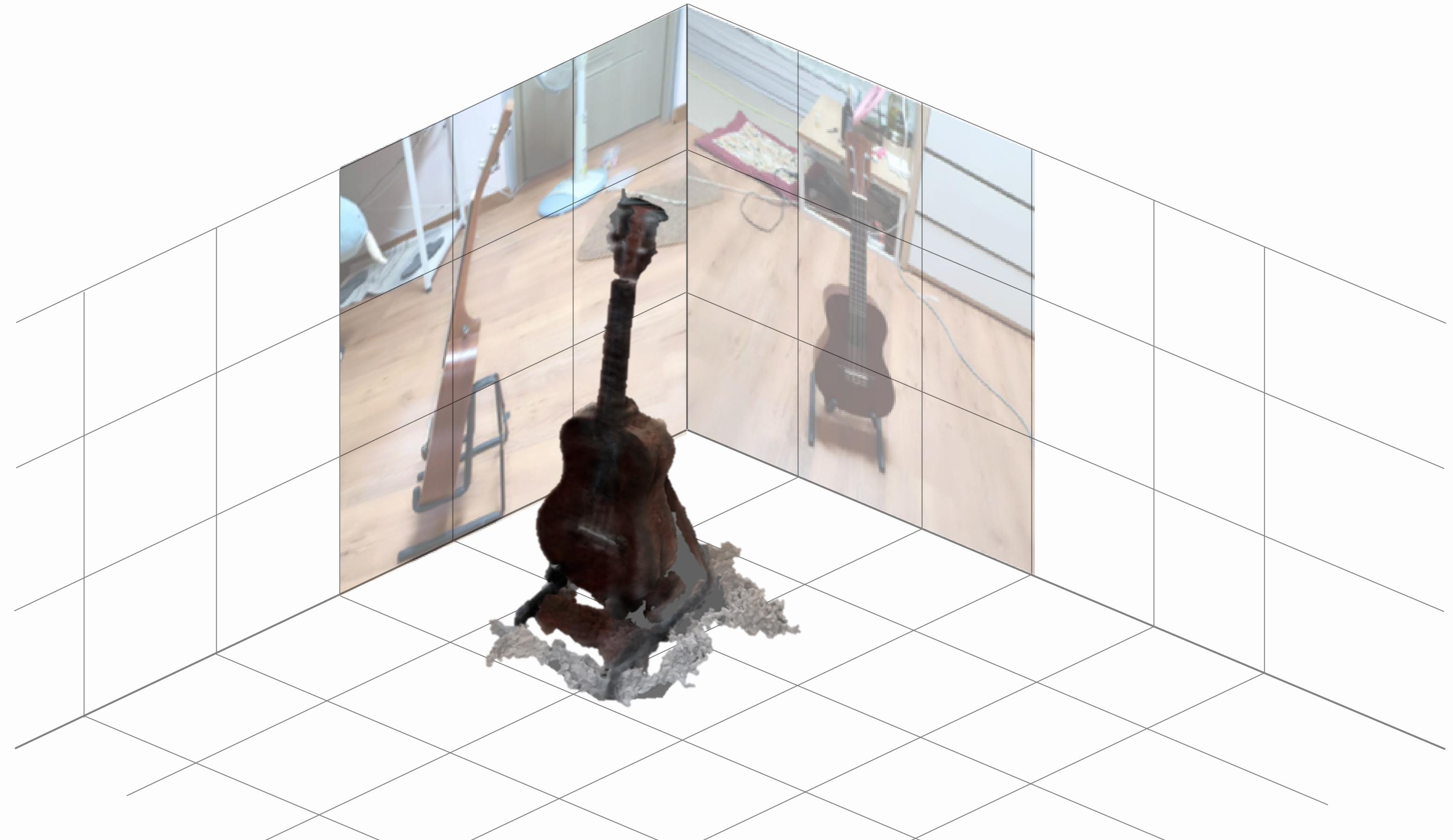
Advanced Mesh file



Advanced Mesh file



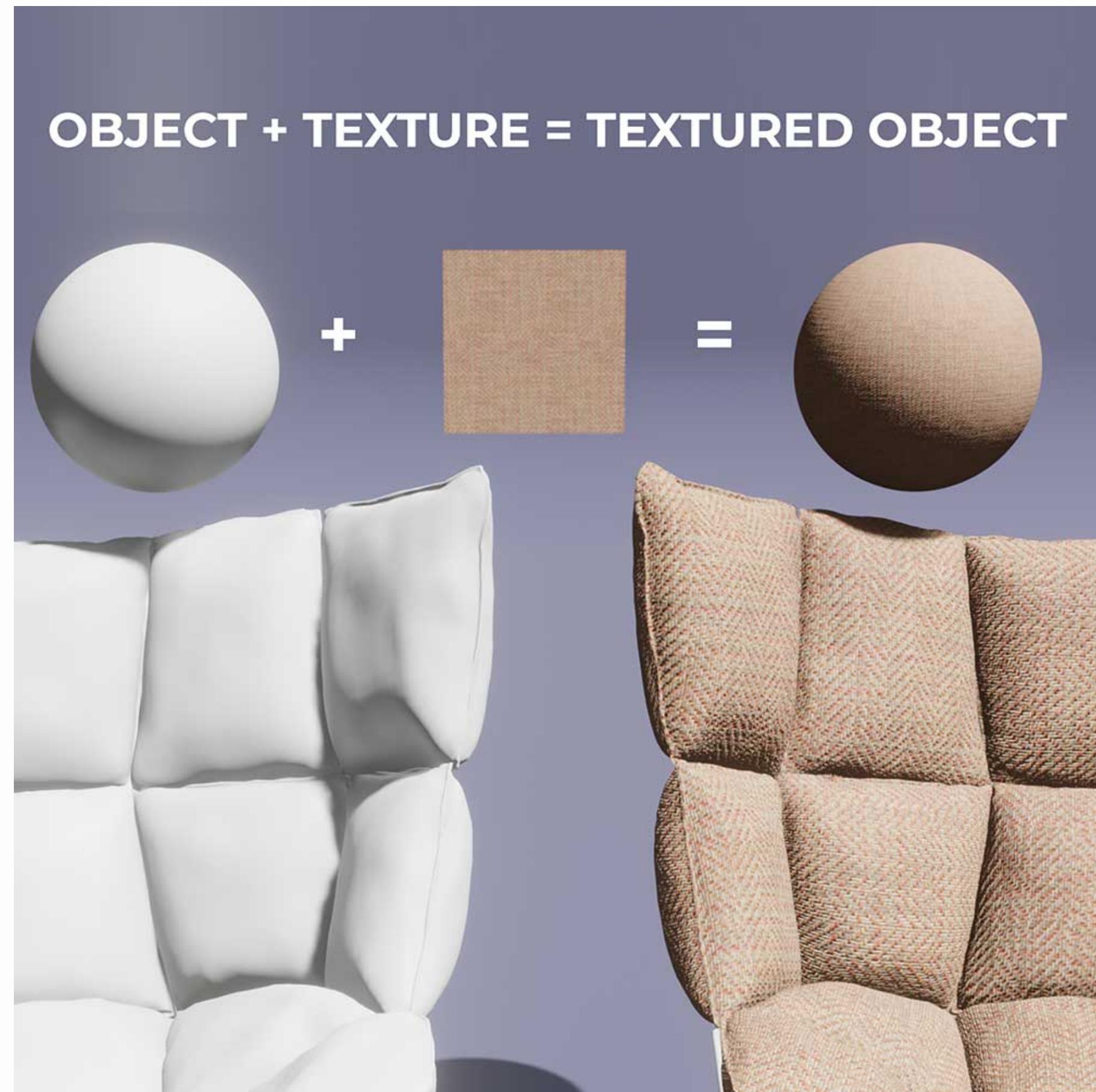
Advanced Mesh file



Advanced Mesh file



Going forward



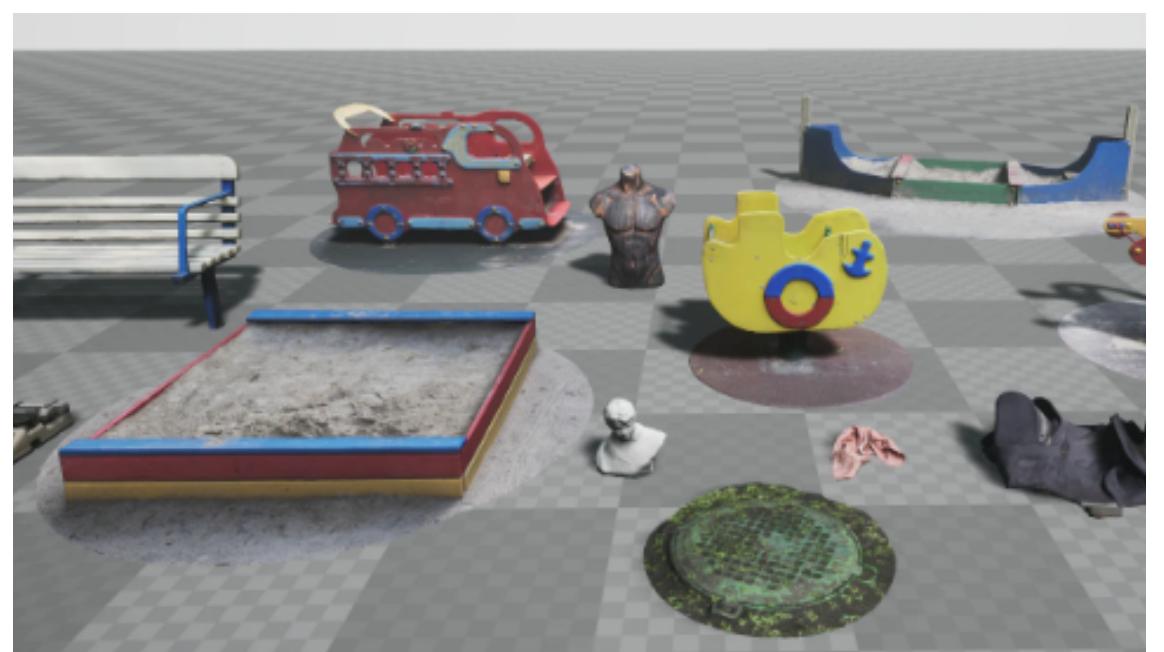
Our targets



VR & AR



3D Modeling



Game Assets

Thanks for watching

