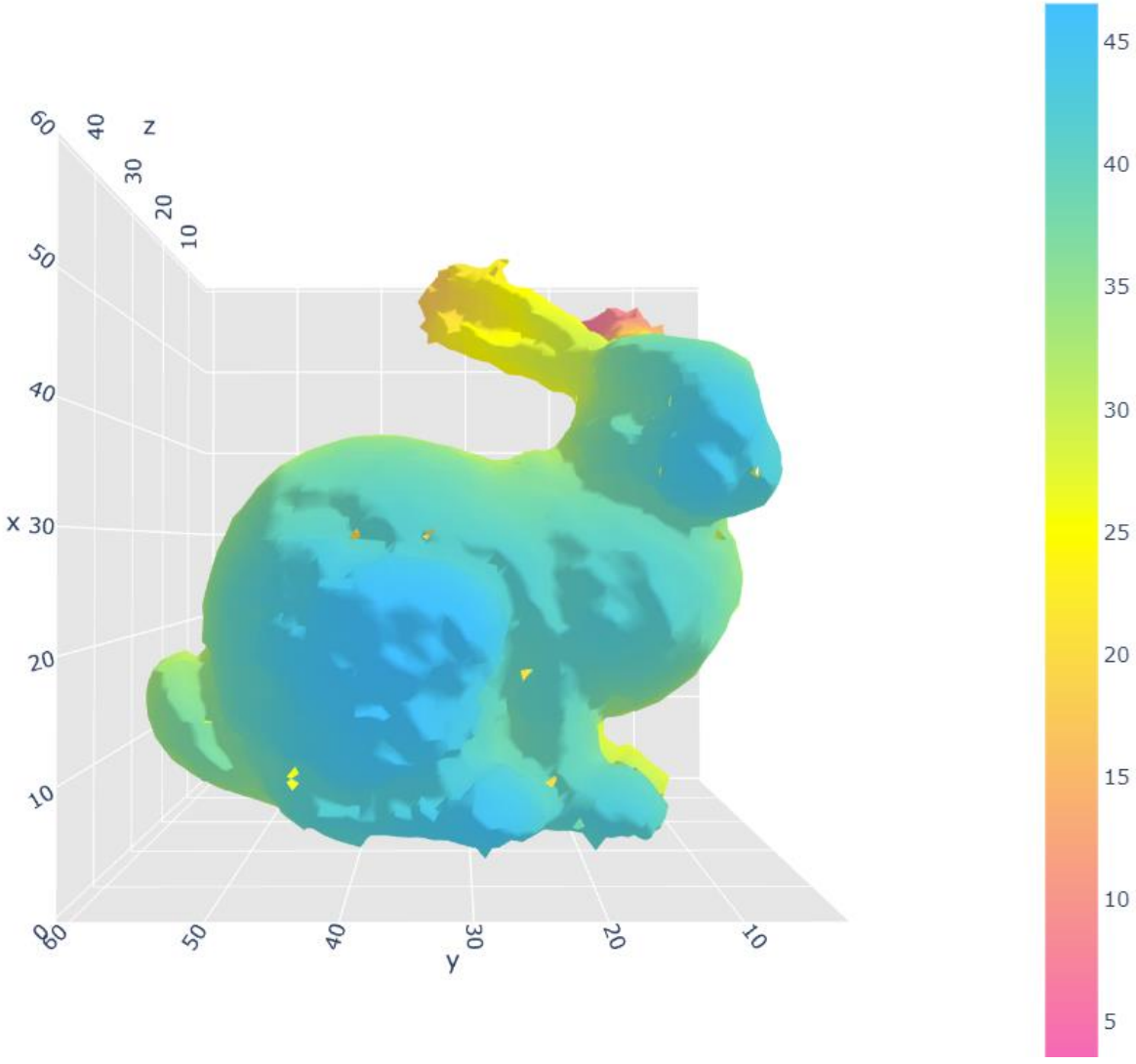
# REPORT FOR ASSIGNMENT 4

**NISHANT RAJ**

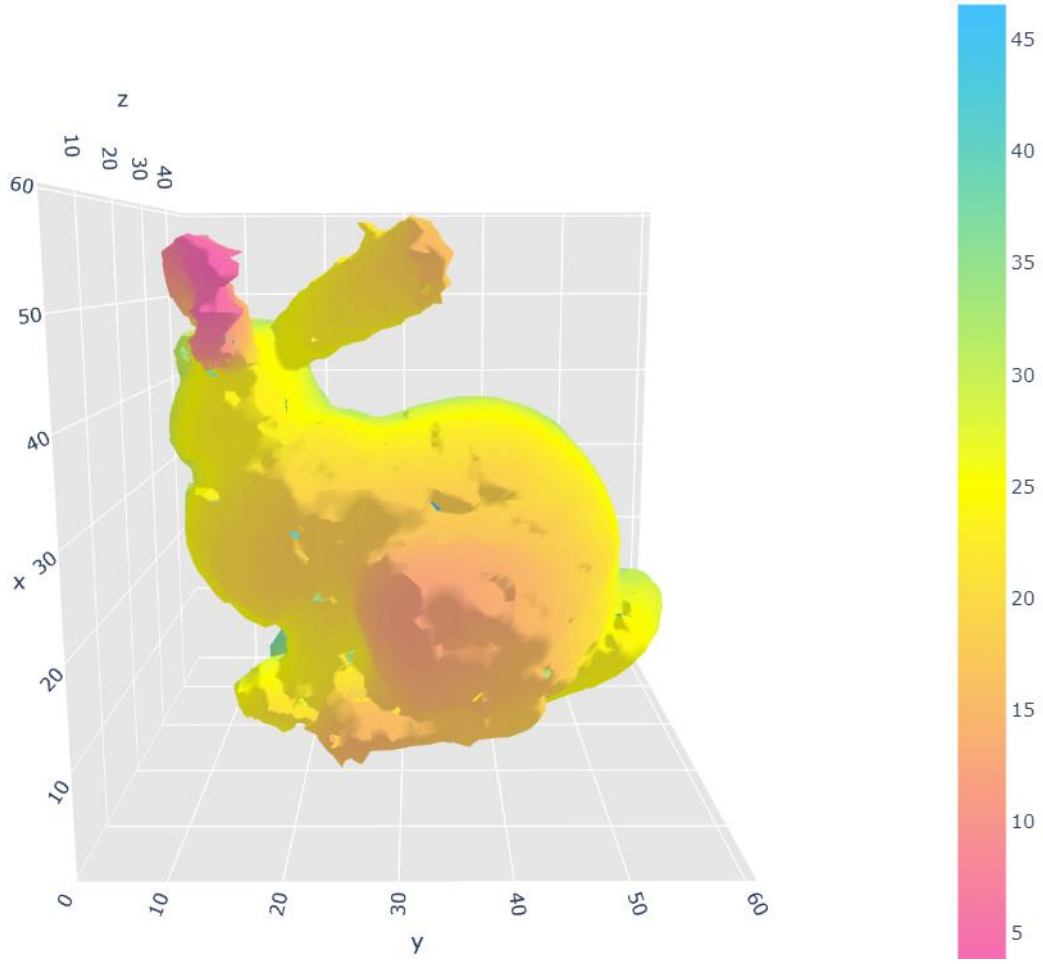
2 screenshots with different views for each of the cases have been taken so that the entire reconstruction is visible properly. There are 4 Questions/Approaches (Naïve Reconstruction {1}, MLS Reconstruction {2}, RBF Reconstruction {3} and Deep SDF Reconstruction {4}. For each of the approaches, there are 3 cases (1000 Points bunny {A}, 500 Points Bunny {B} and sphere {C}. Also, each case has 2 different views which are provided. e.g., Fig 1(A): View 1 means that this figure is for 1st Approach (Naïve Reconstruction), A (1000 points bunny) and this is the first view for the snippet taken.

## QUESTION 1: NAÏVE RECONSTRUCTION

### *(A) BUNNY WITH 1000 POINTS*




***1(A): VIEW 1***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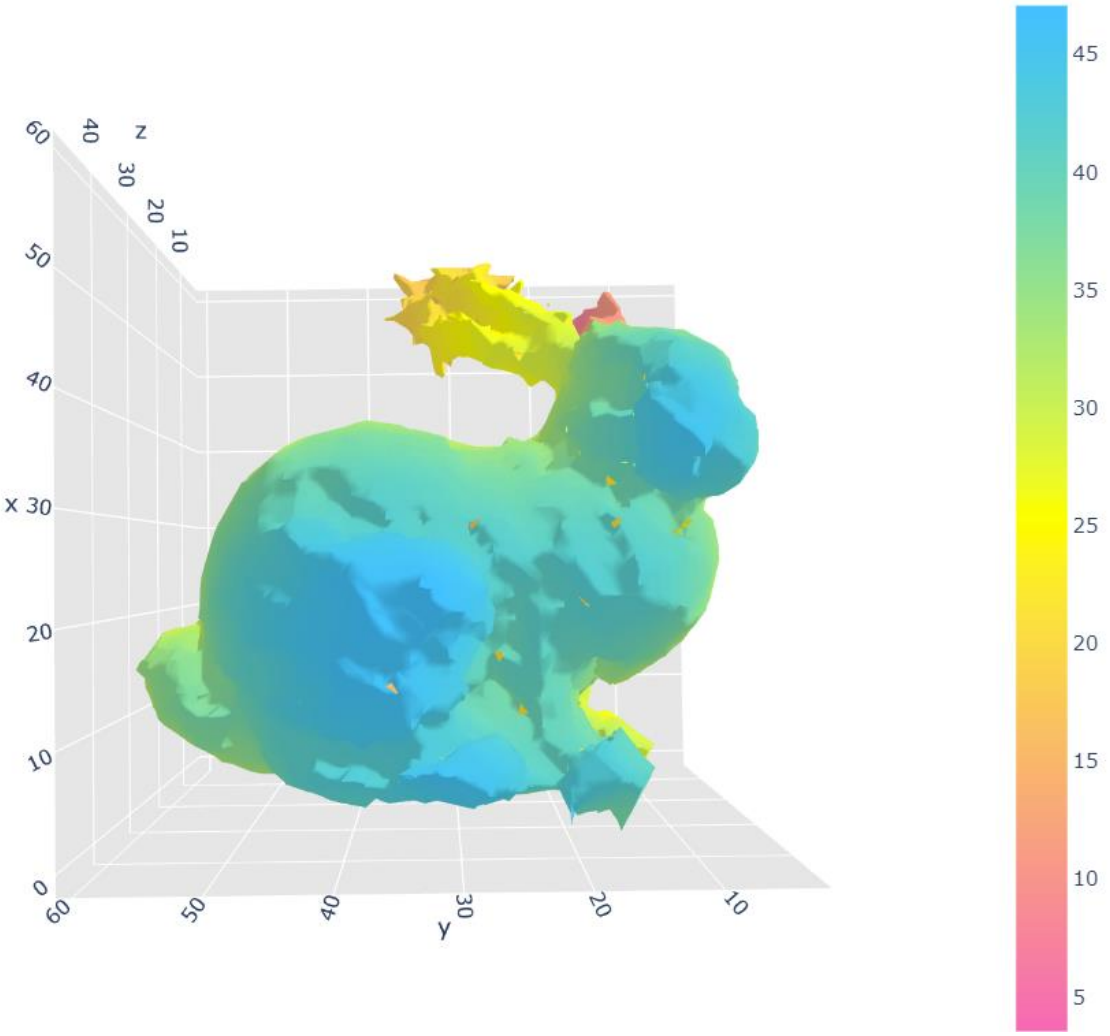
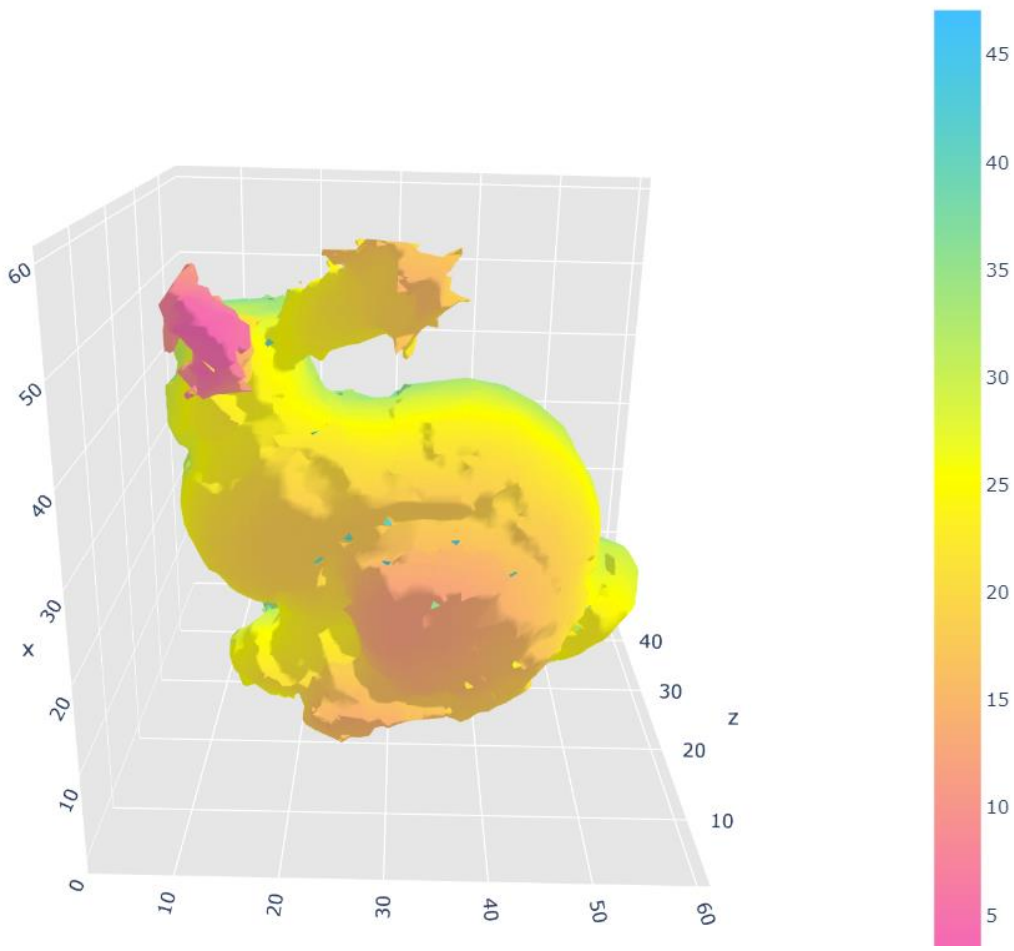
***1(A): VIEW 2***

***(B) BUNNY WITH 500 POINTS***

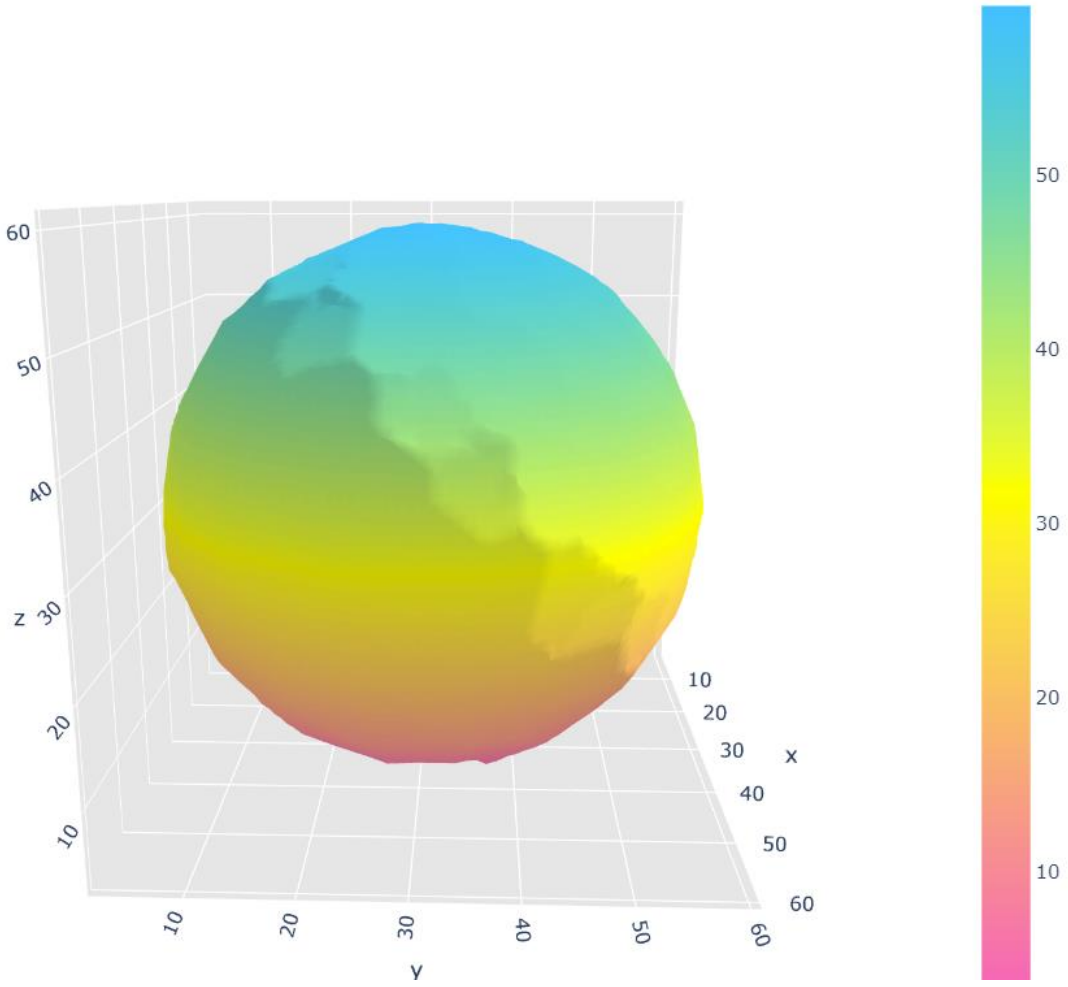



***<u>1(B): VIEW 1</u>***

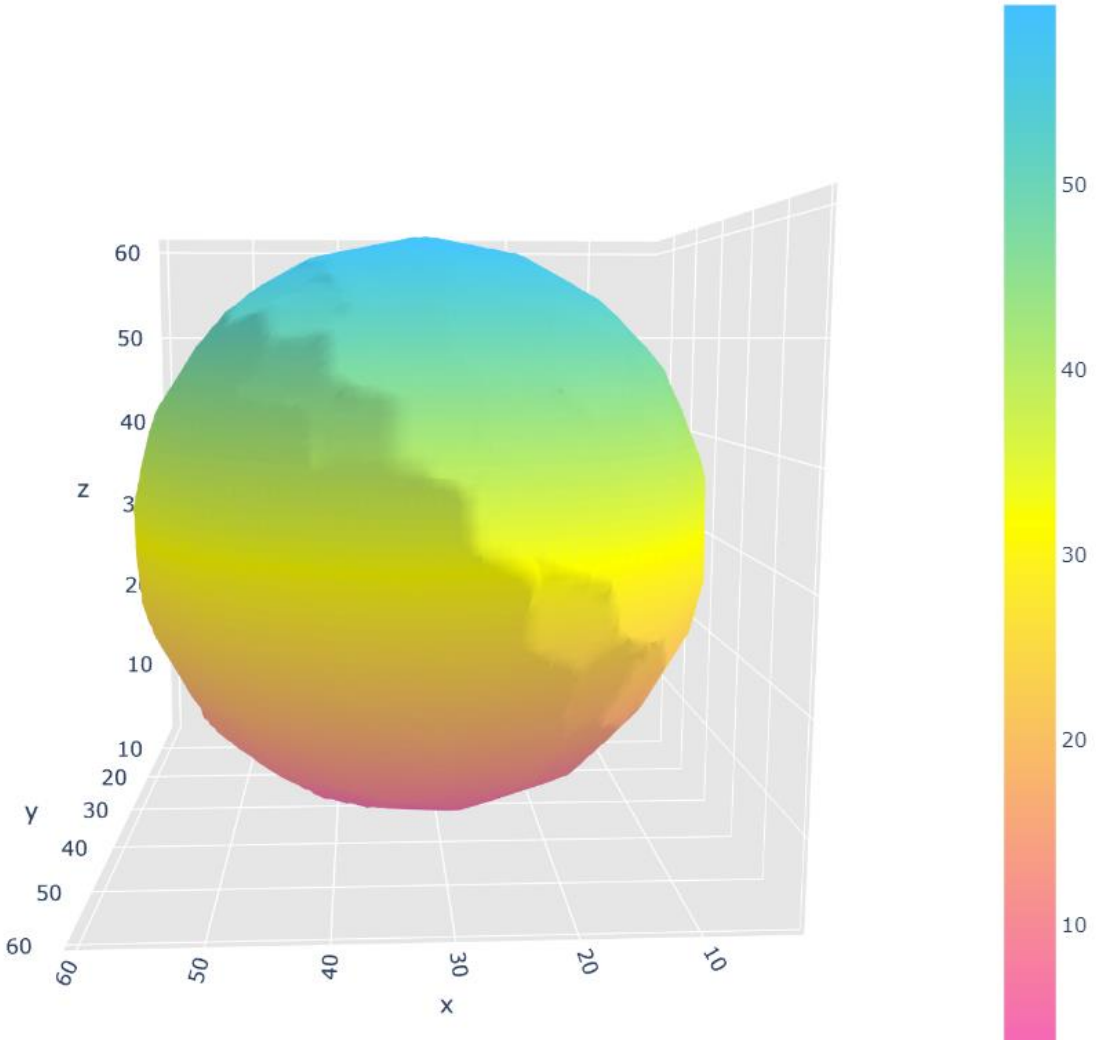



***1(B): VIEW 2***

***(C) <u>SPHERE:</u>***



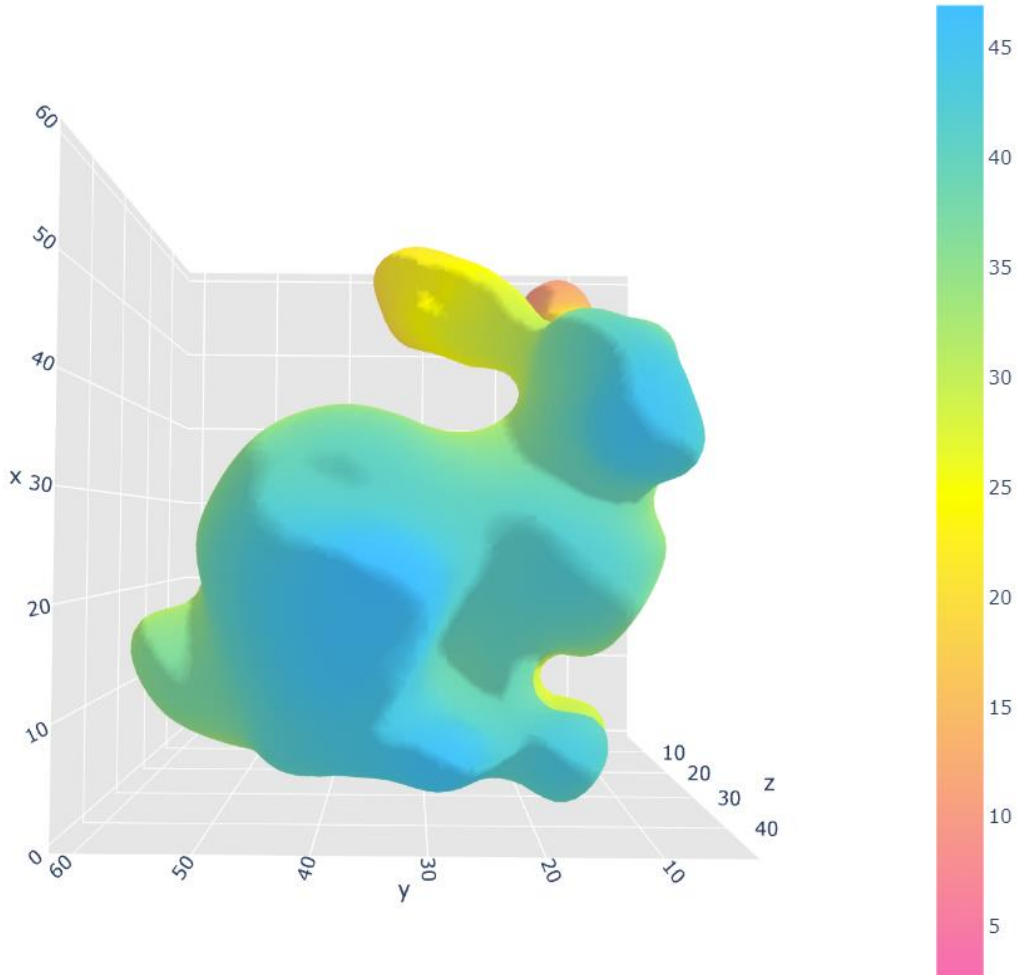

***<u>1(C) : VIEW 1</u>***



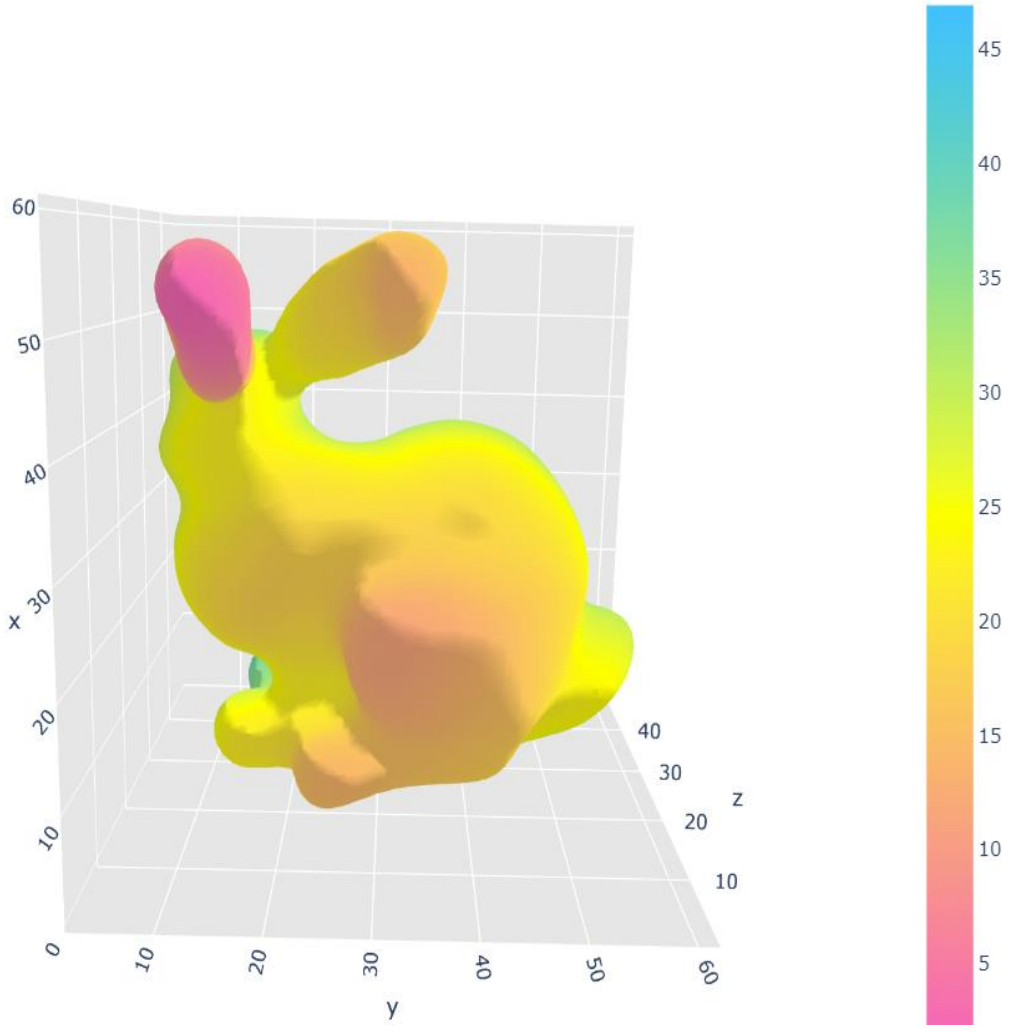

***1(C): VIEW 2***

***QUESTION 2: MLS RECONSTRUCTION***

***(2A): BUNNY WITH 1000 POINTS***




***2(A): VIEW 1***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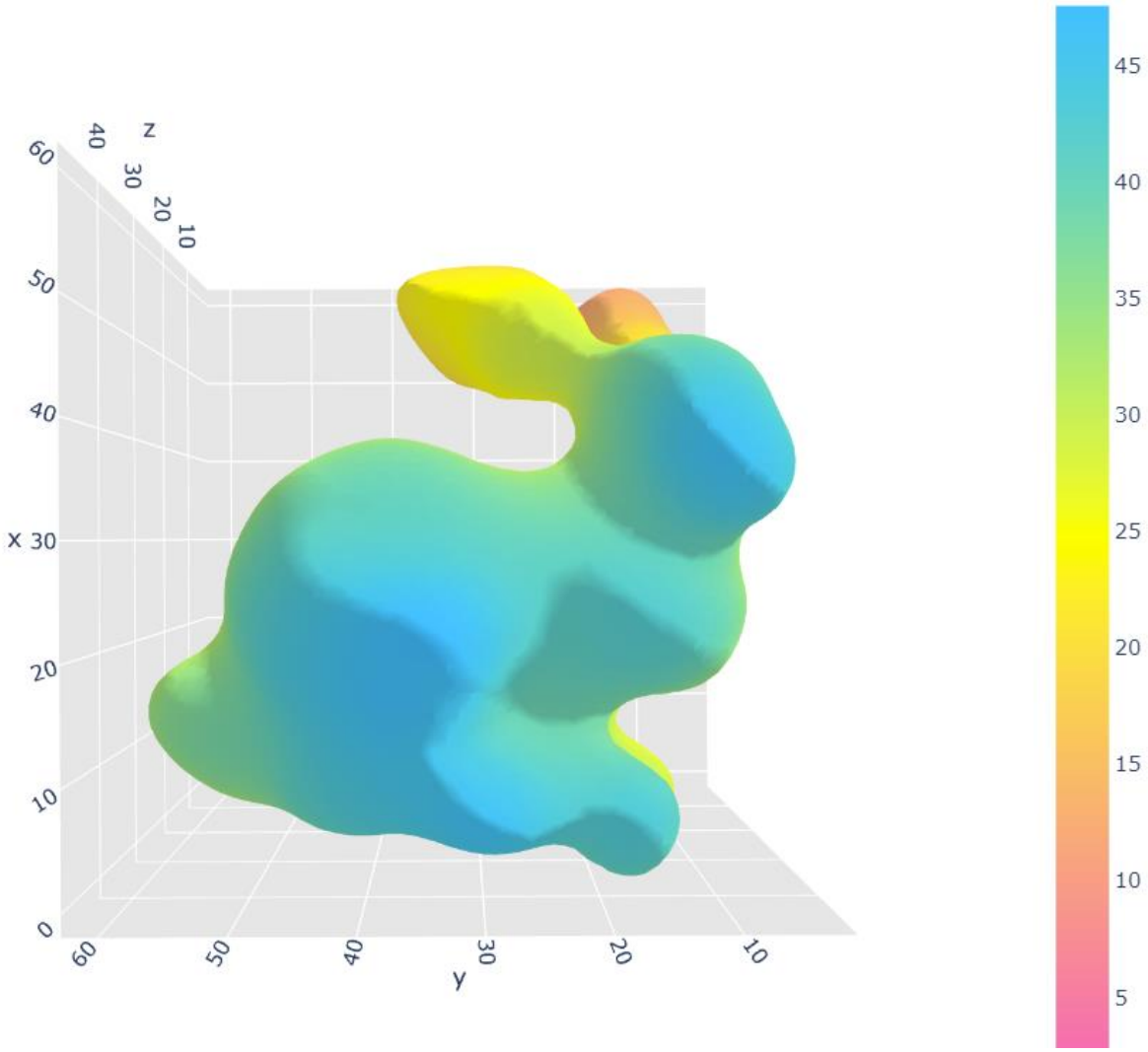
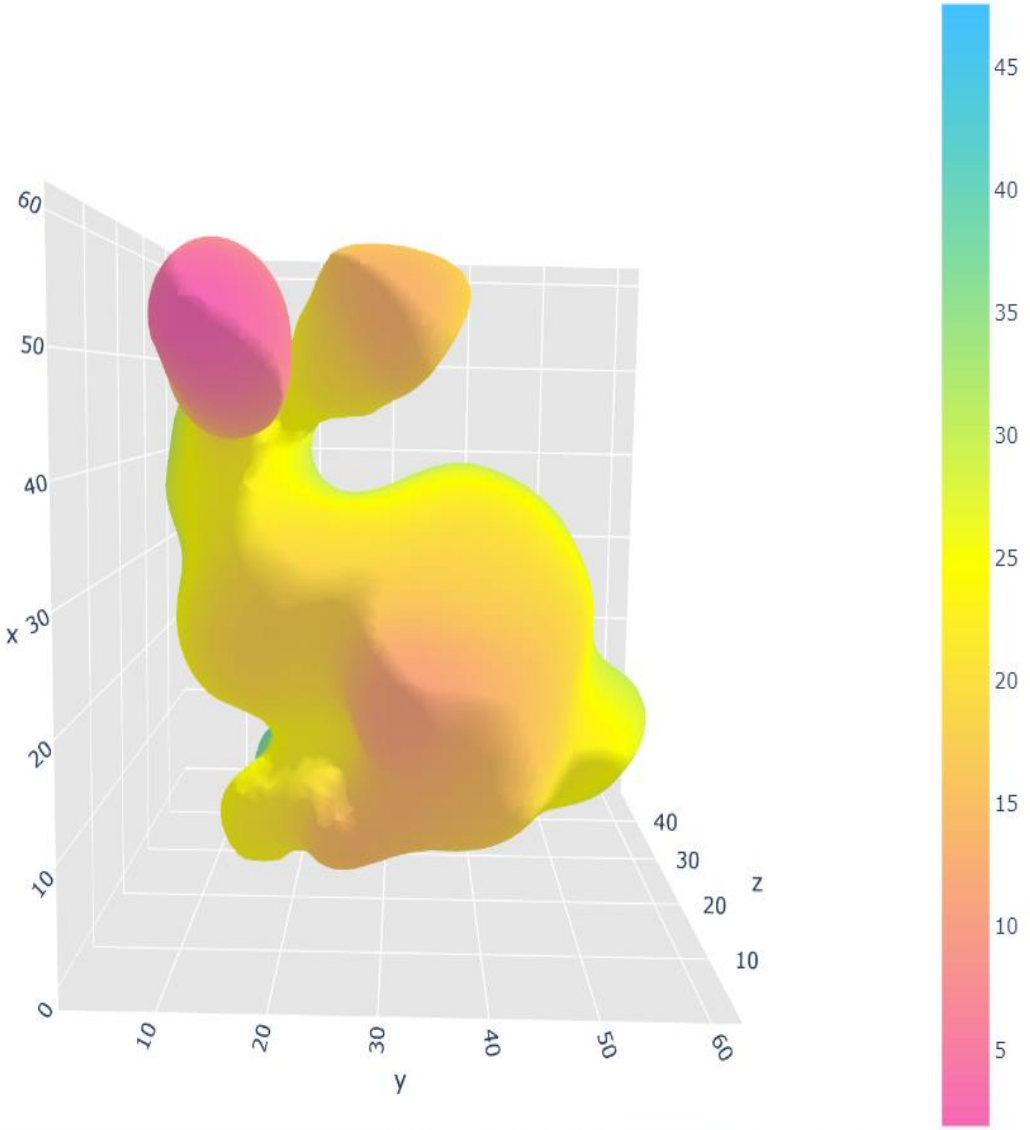
***2(A): VIEW 2***

***(2B) : BUNNY WITH 500 POINTS:***




***2(B): VIEW 1***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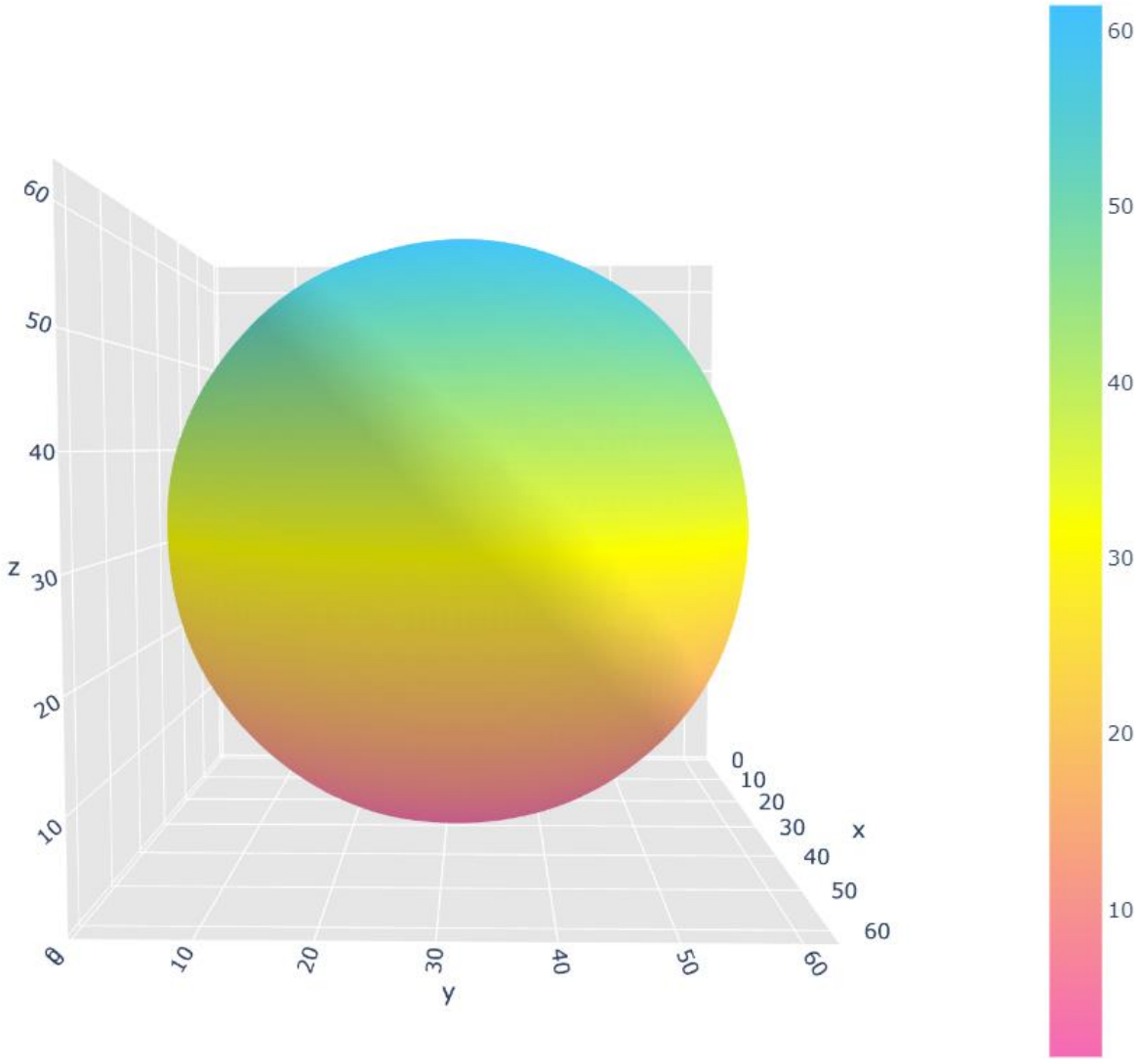
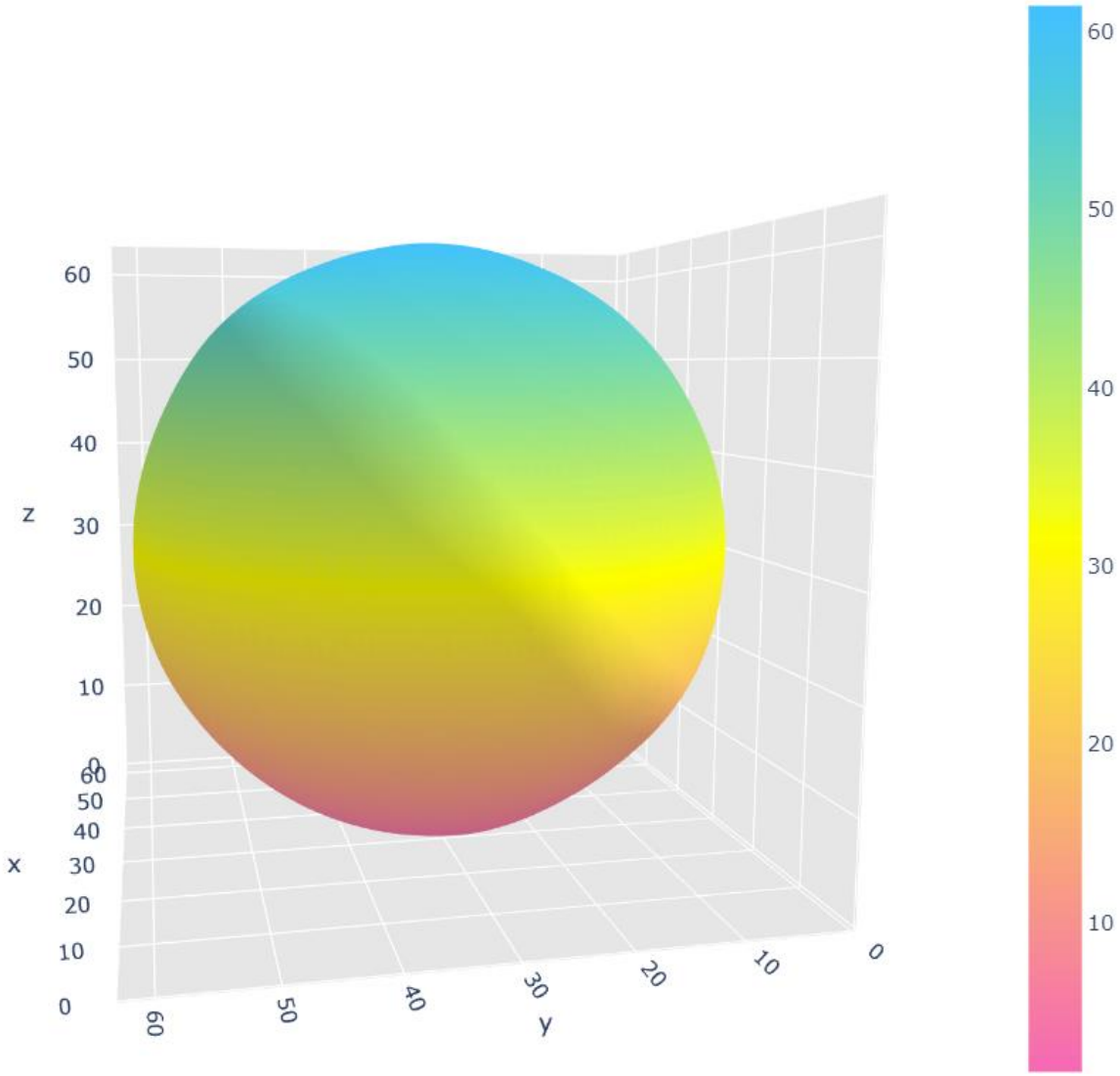
***2(B): VIEW 2***

***(2C) SPHERE:***




***2 (C): VIEW 1***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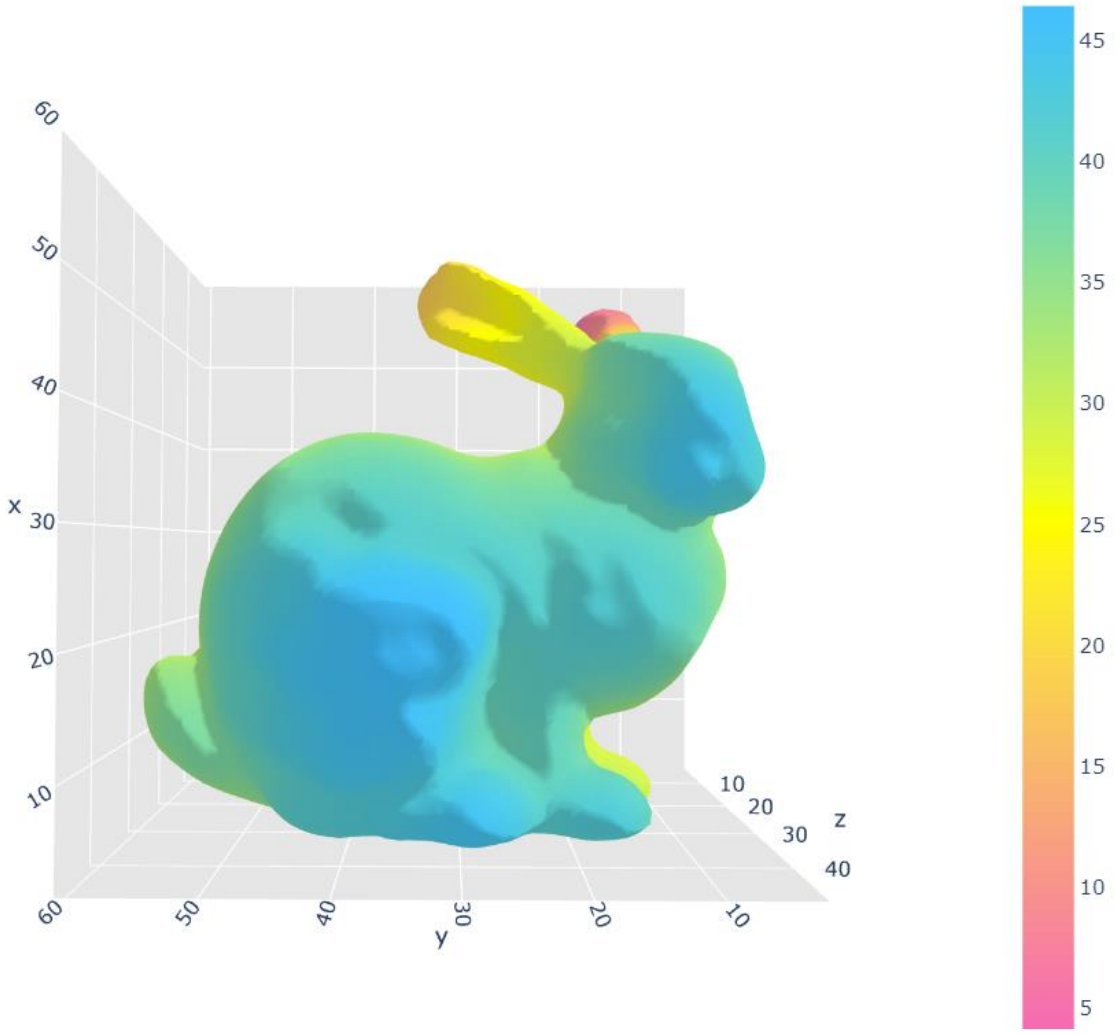
***2(C): VIEW 2***

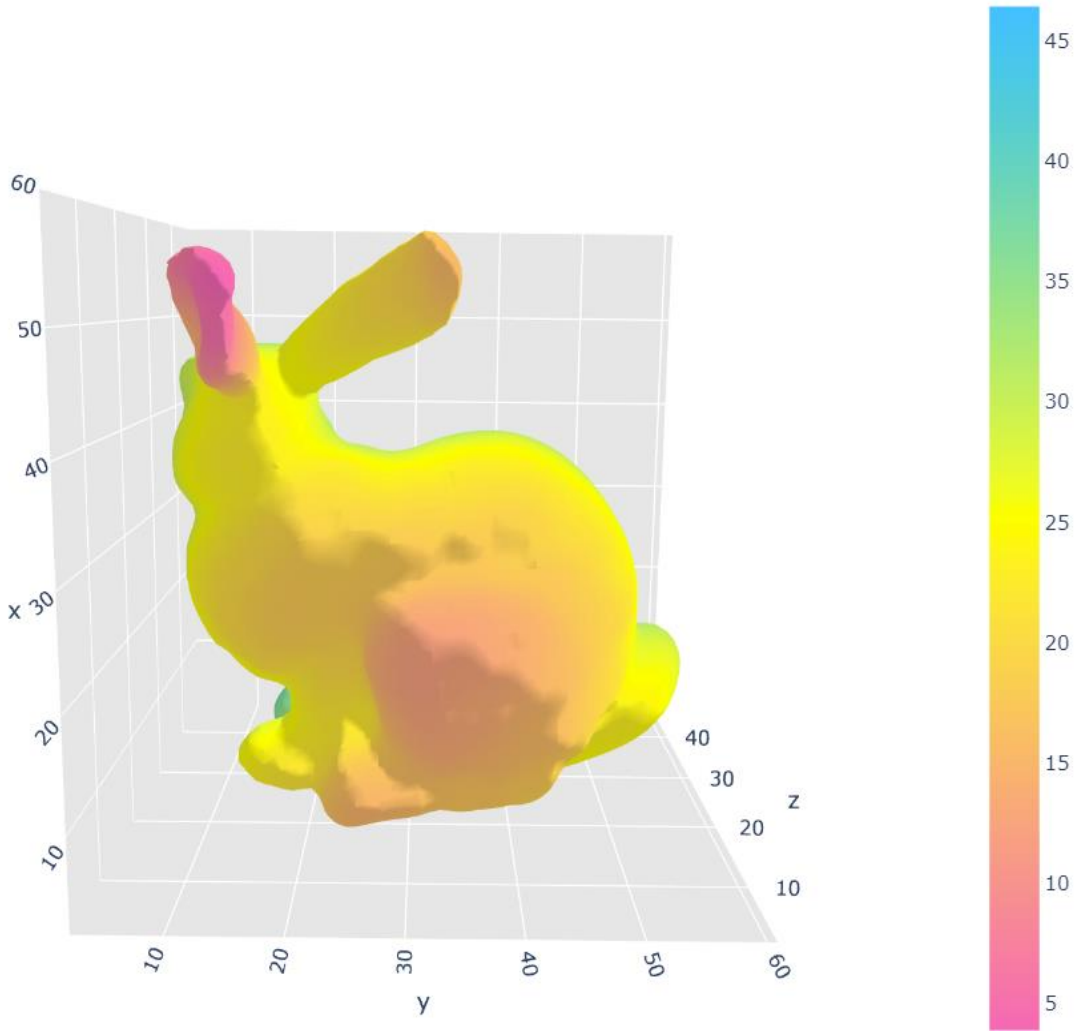
***QUESTION3: RBF RECONSTRUCTION***

***Value of ε yielding the best reconstruction results:*** **1e-5**

***(3A) BUNNY WITH 1000 POINTS***




***3(A): VIEW 1***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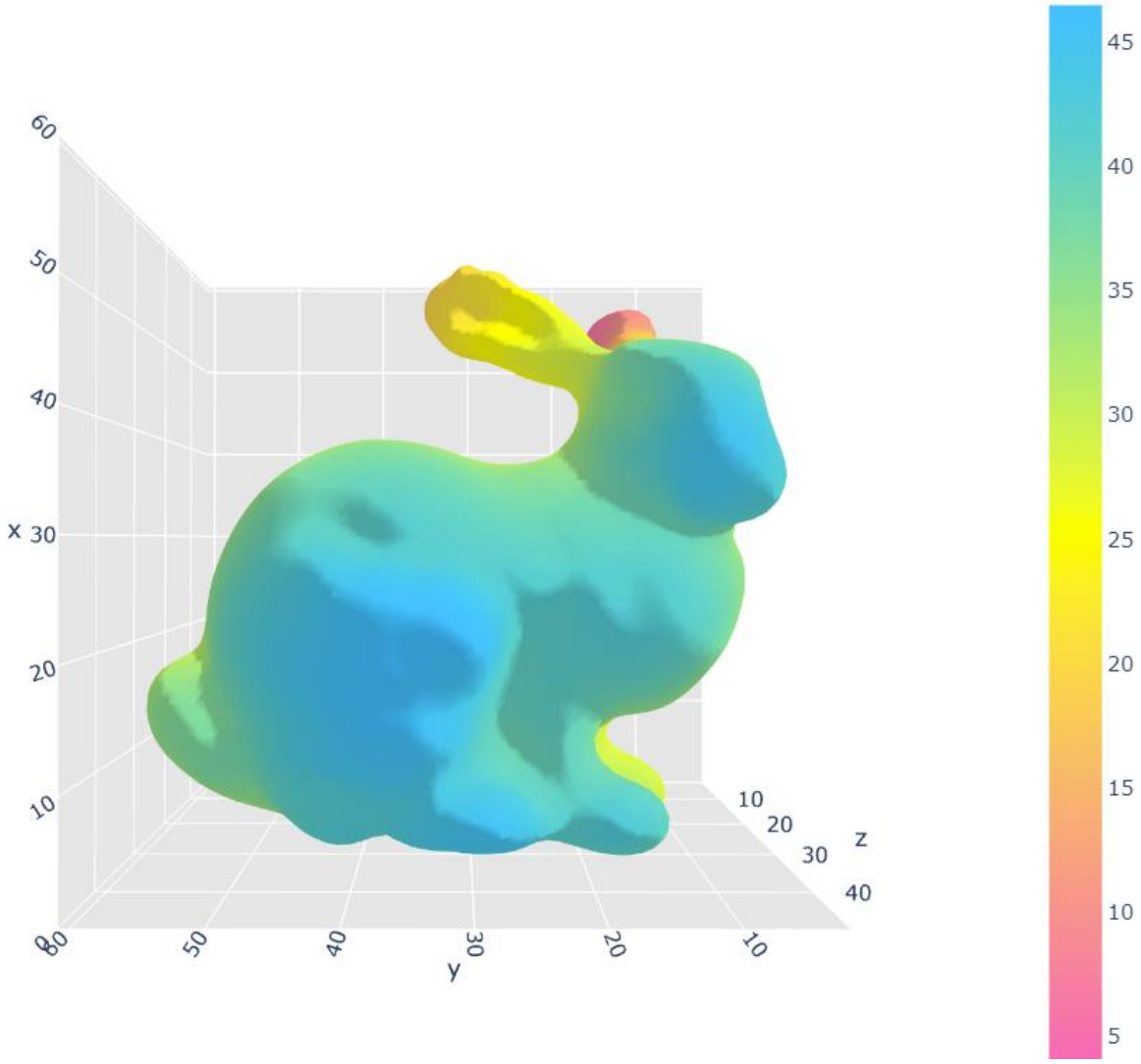
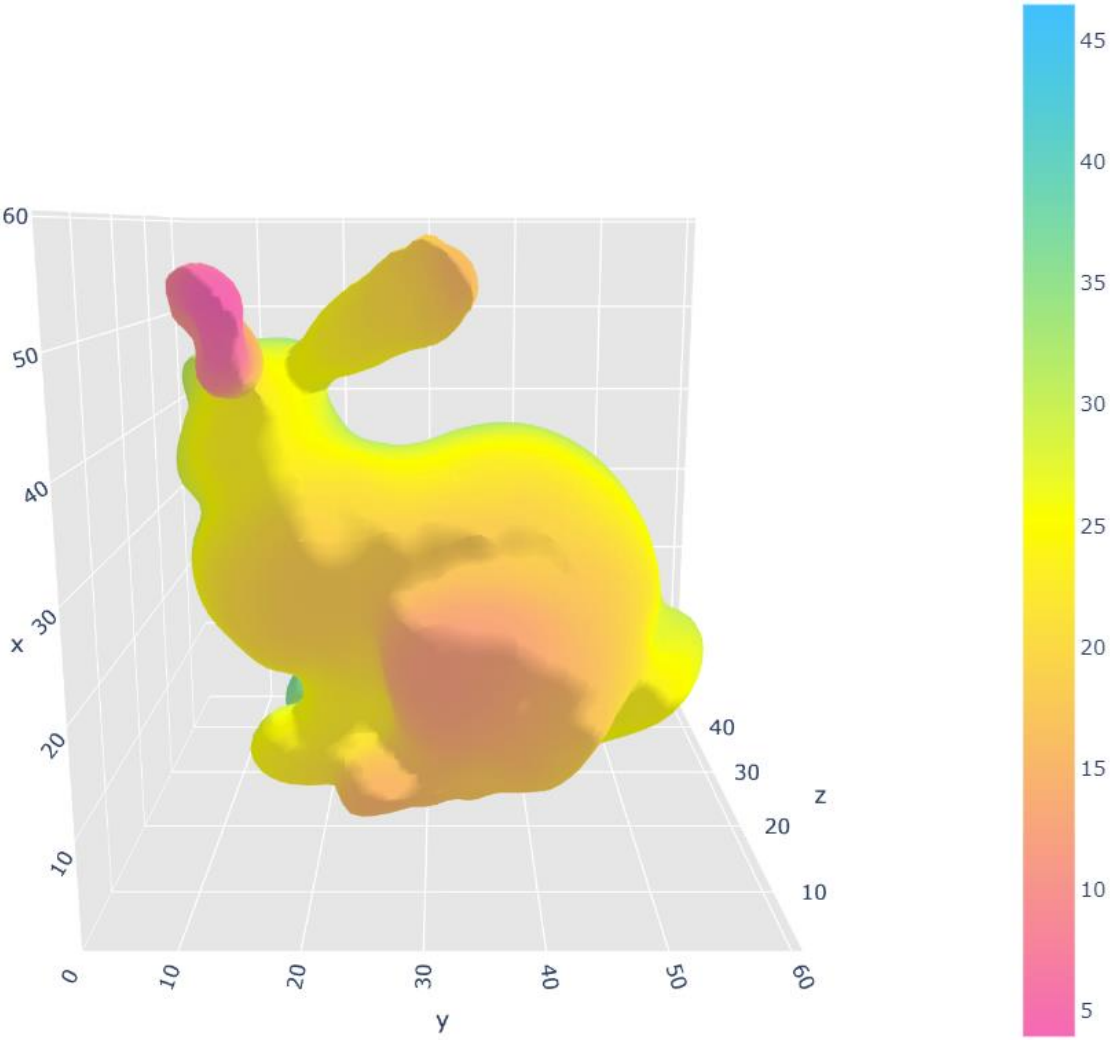
***3(A): VIEW 2***

***(3B) BUNNY WITH 500 POINTS***




***3(B): VIEW 1***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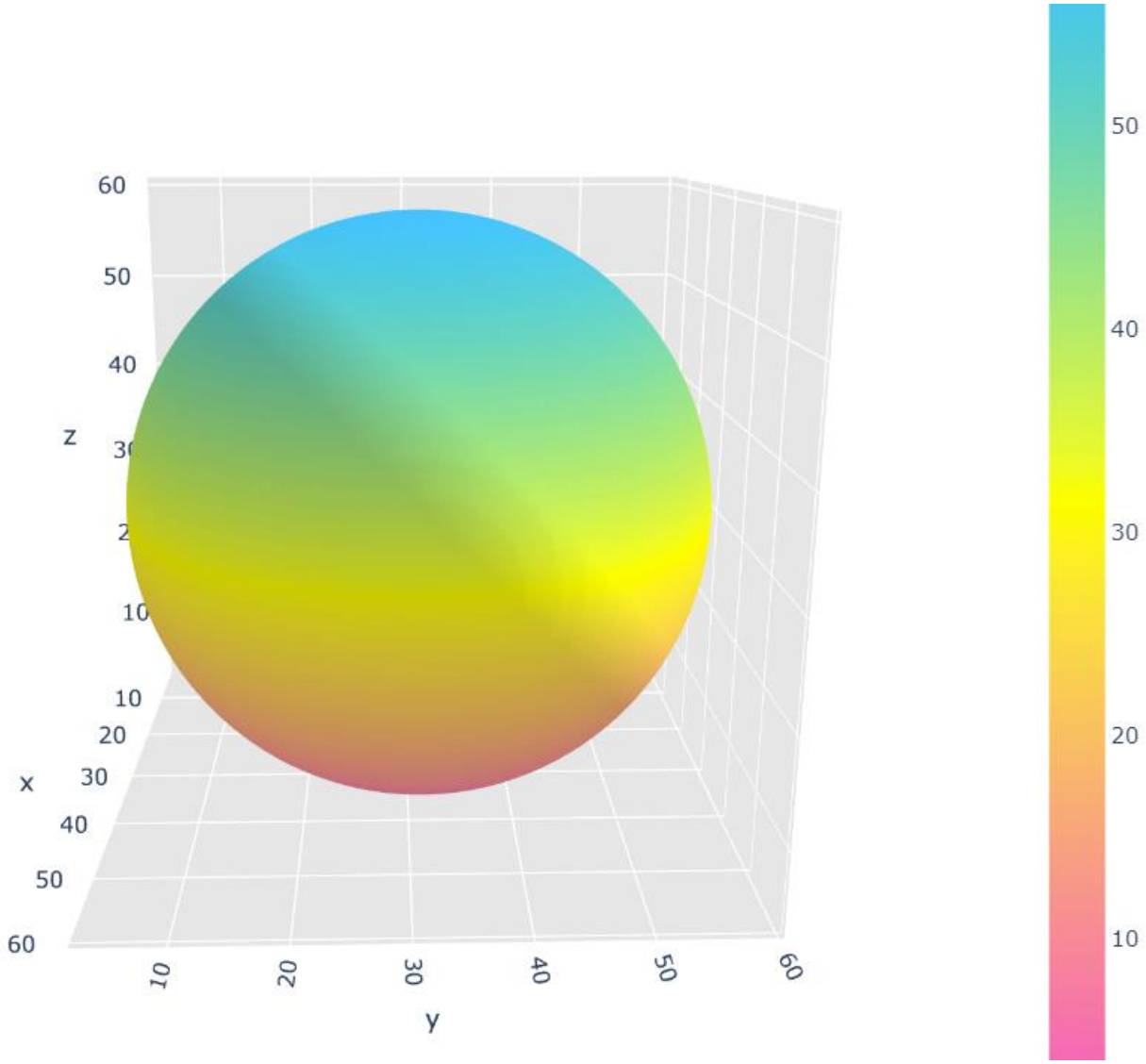
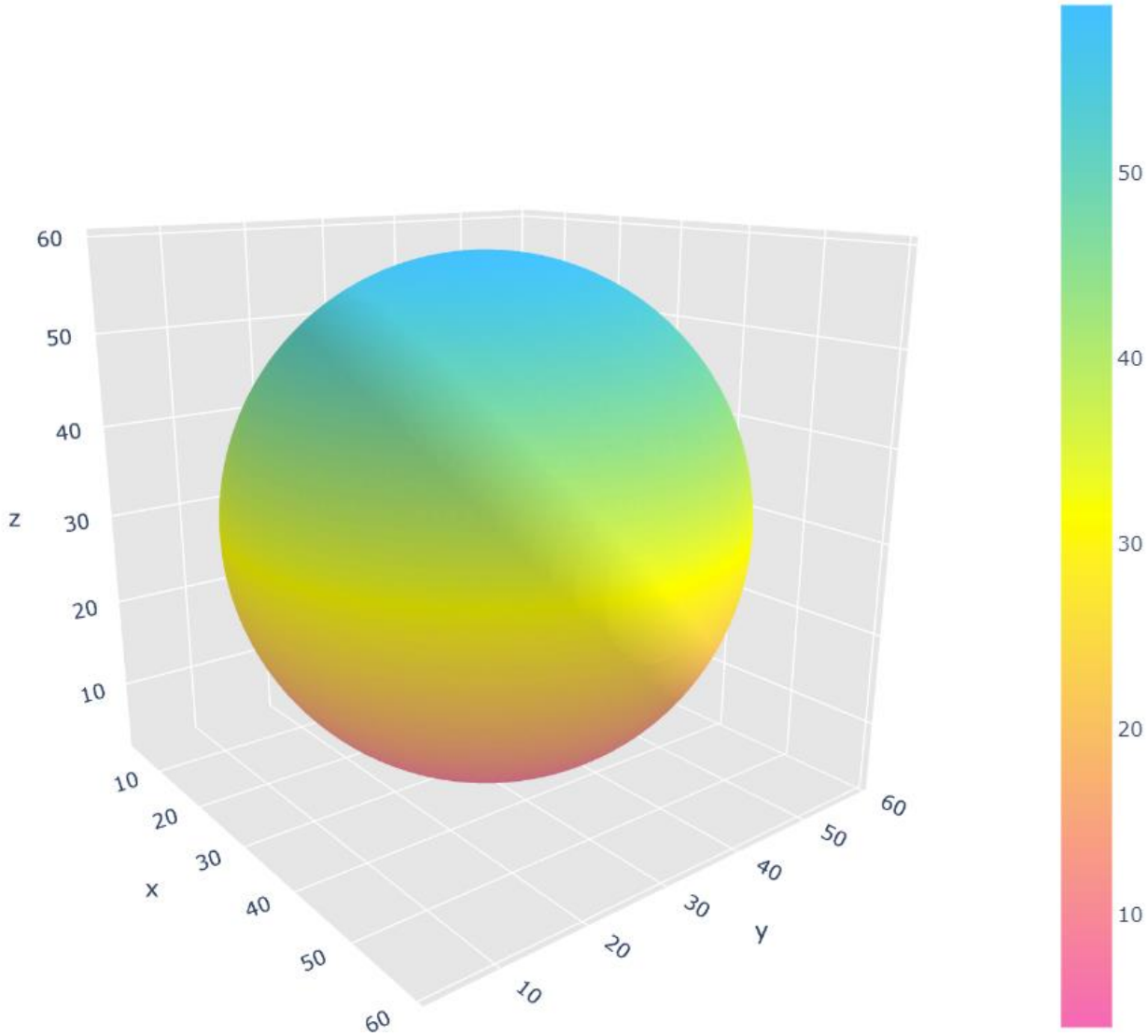
***3(B): VIEW 2***

***(3C) SPHERE:***



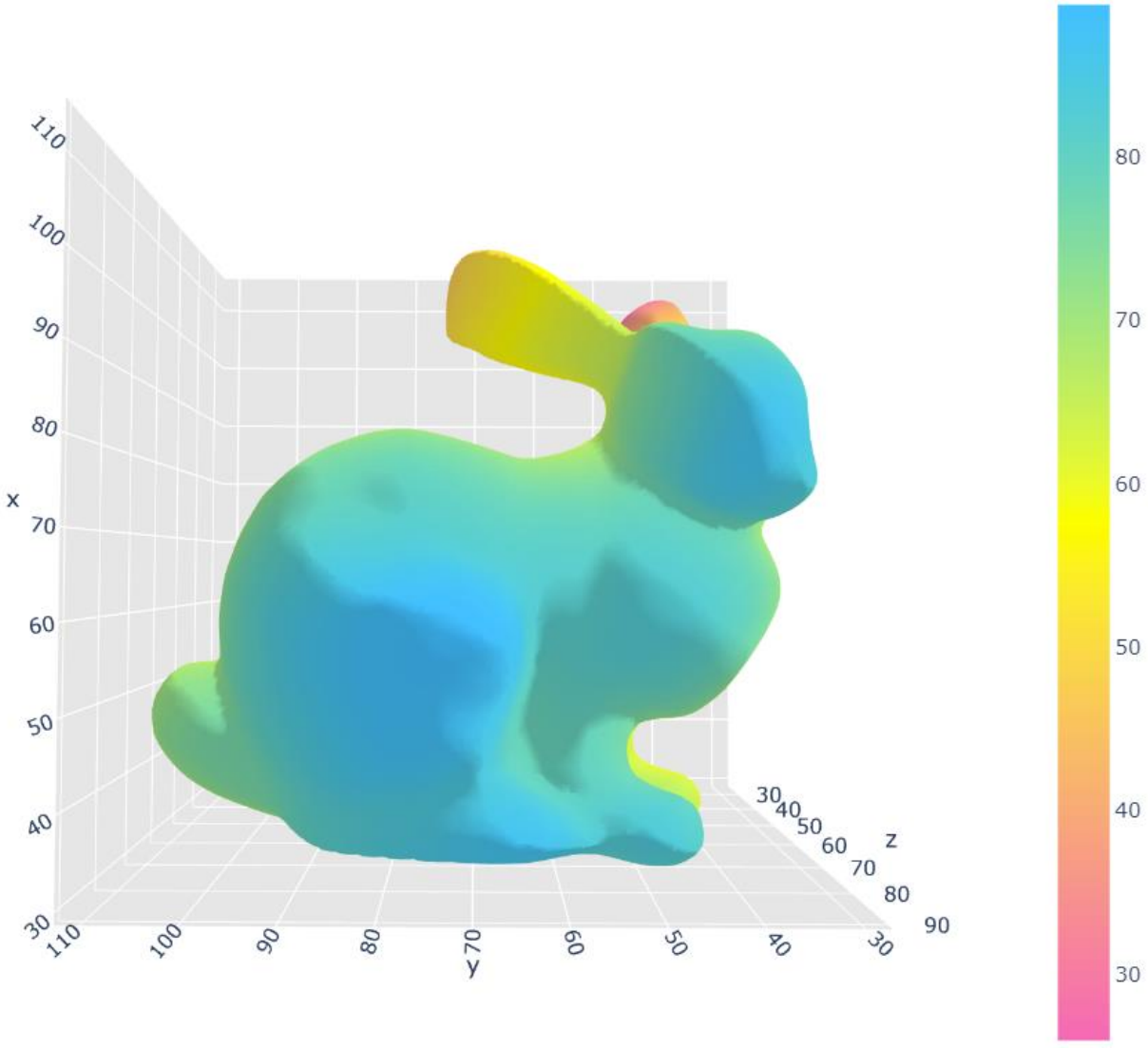

***3(C): VIEW 1***



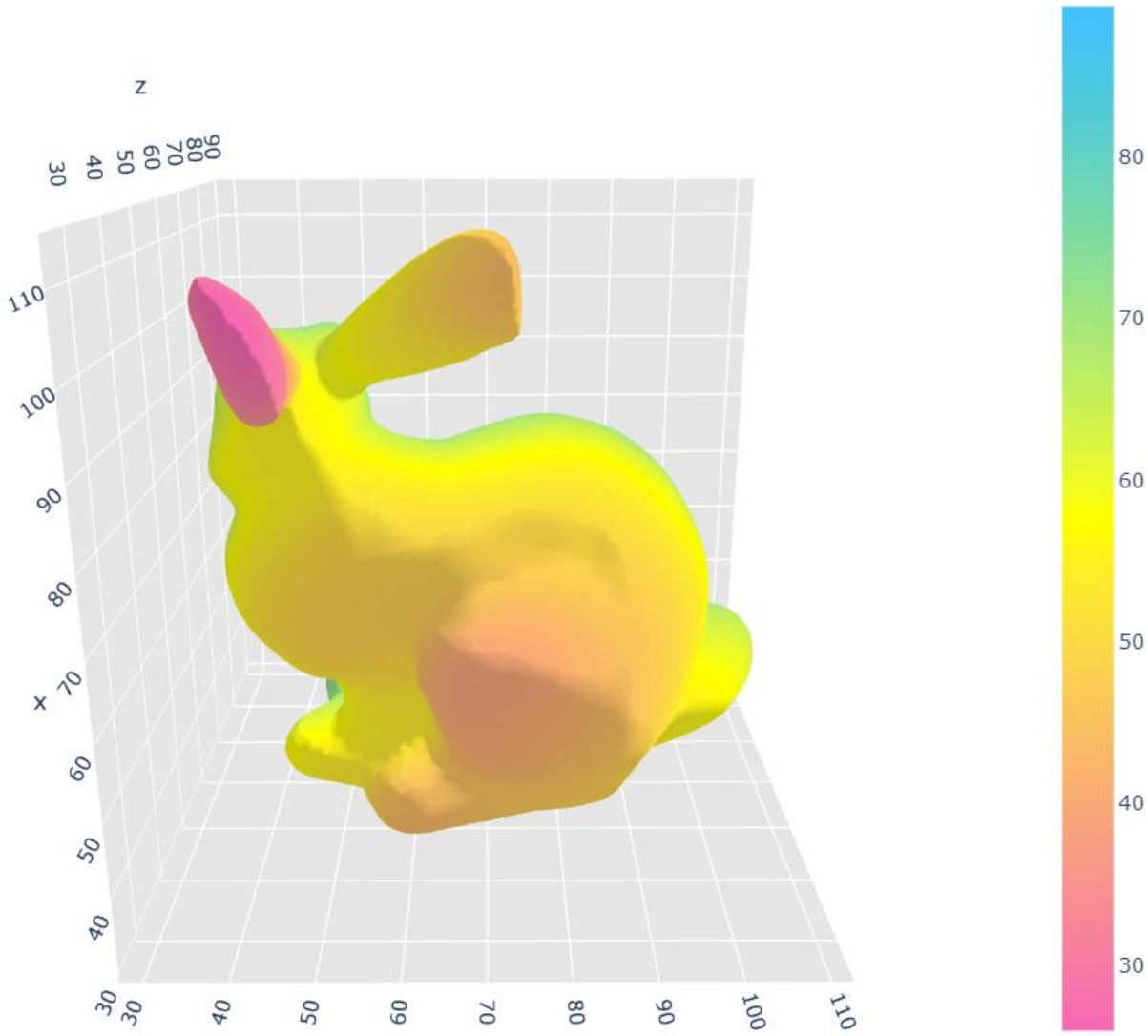

***3(C): VIEW 2***

***(4): DEEP SDF RECONSTRUCTION:***

***(4A): BUNNY WITH 1000 POINTS***




***4(A): VIEW 1***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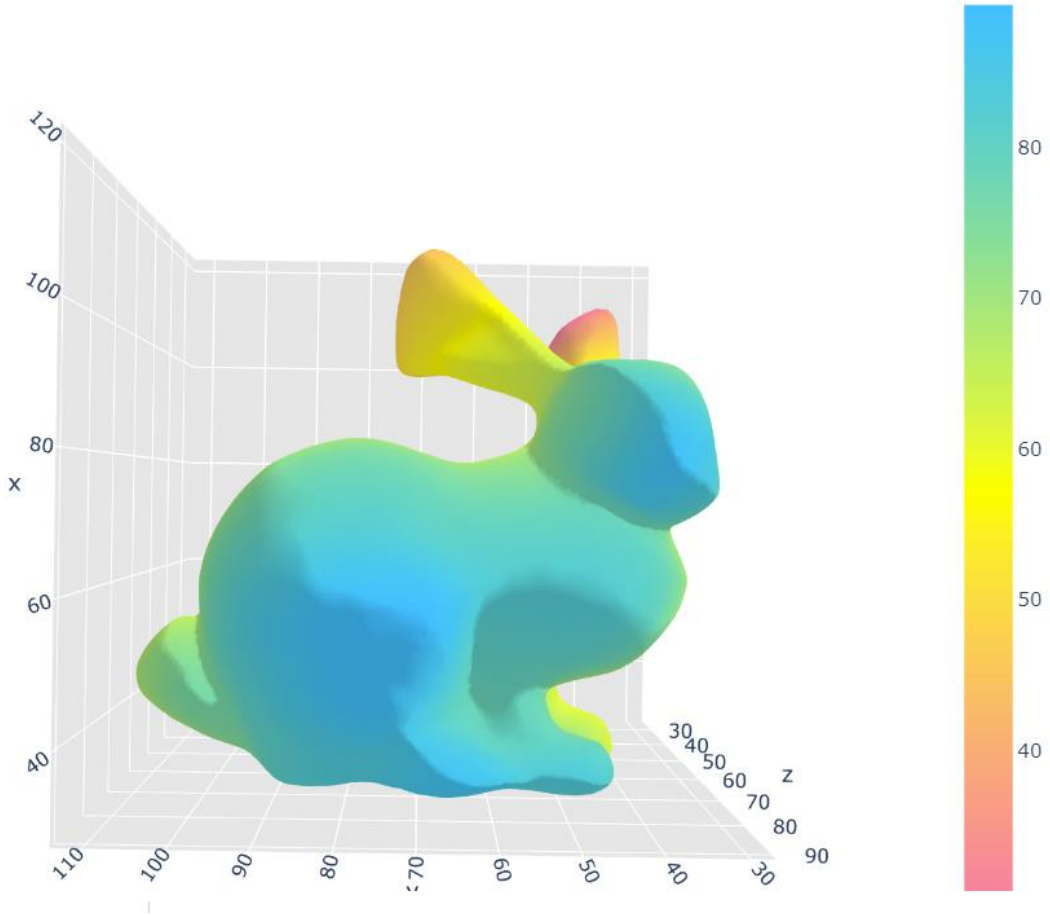
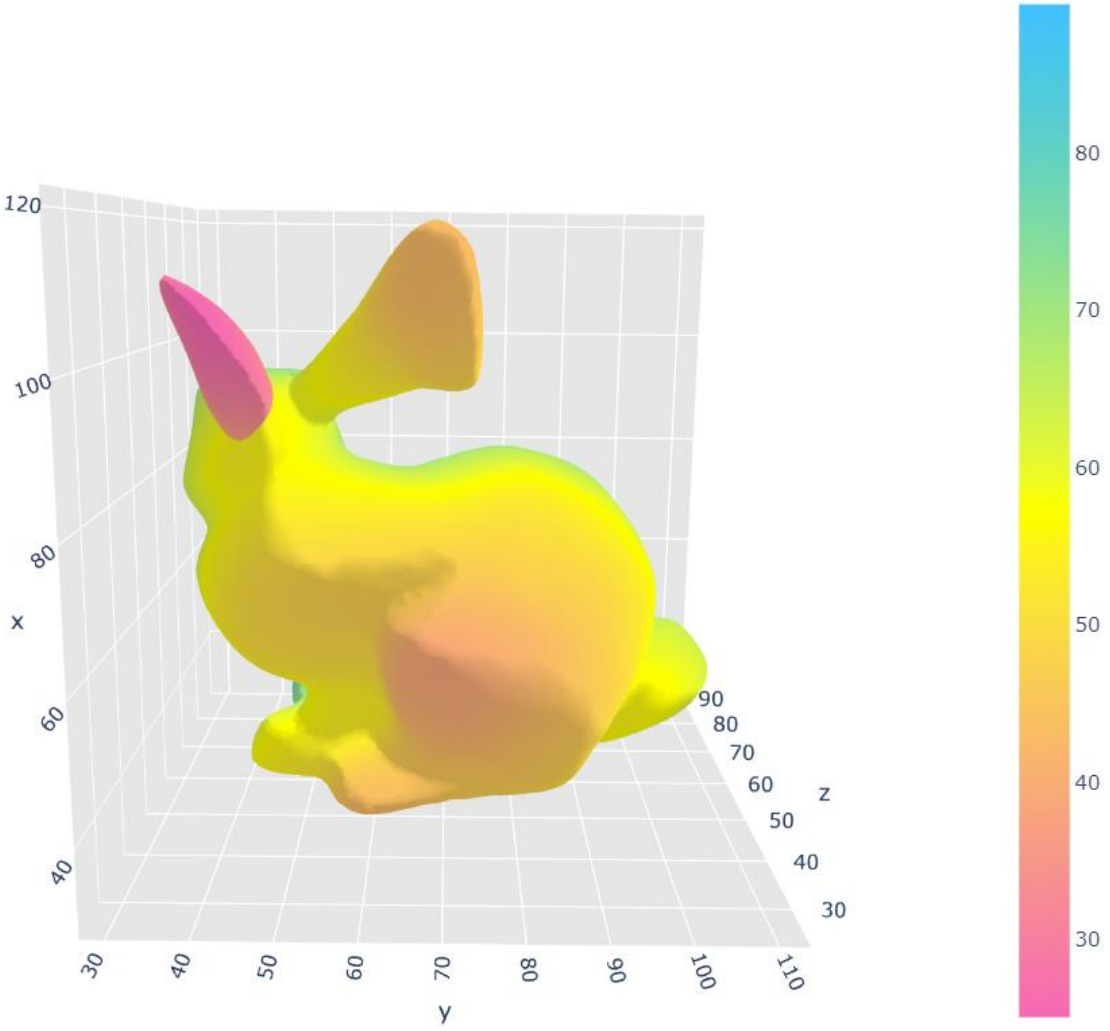
***4(A): VIEW 2***

***4(B): BUNNY WITH 500 POINTS:***




***4(B): VIEW1***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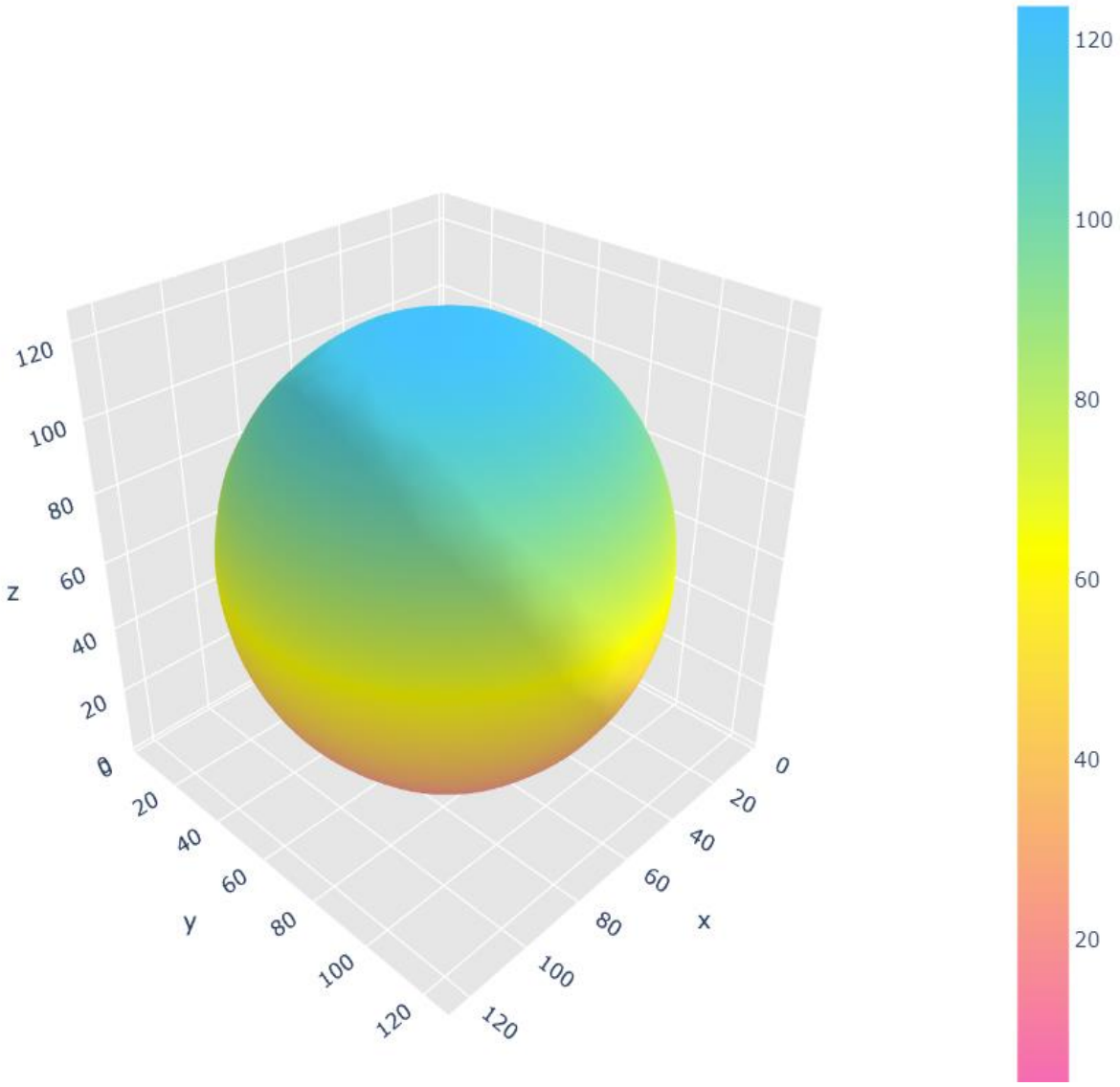
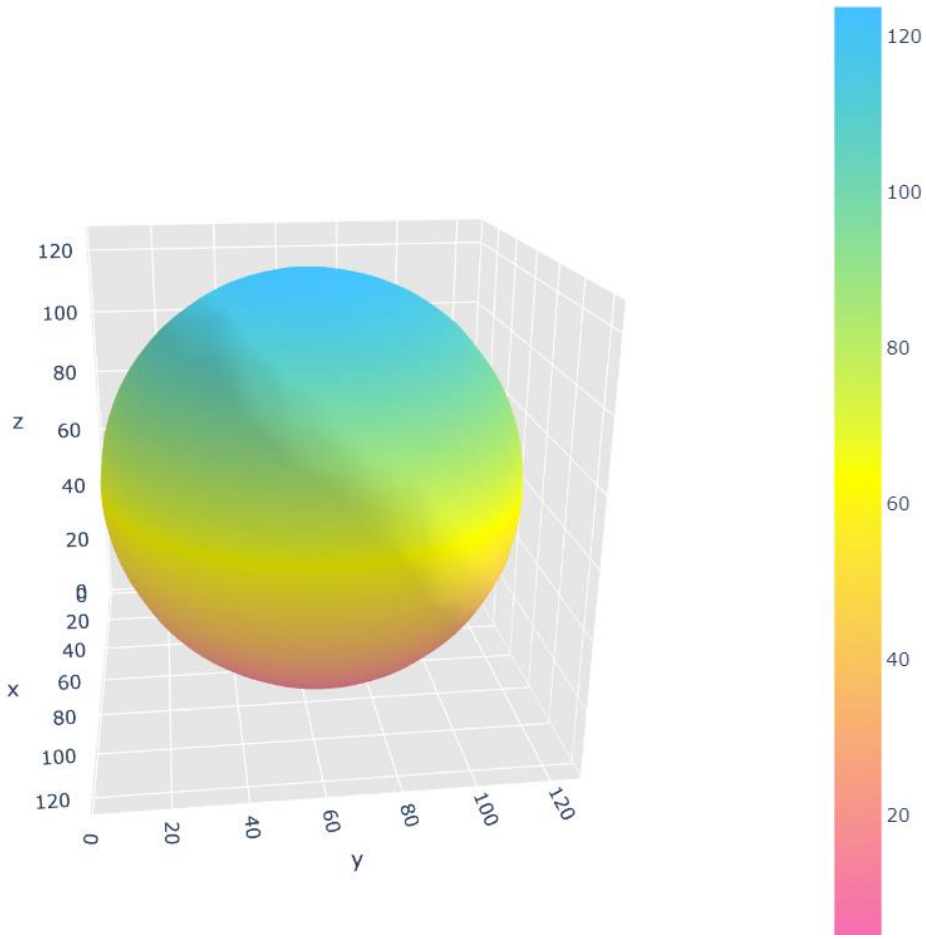
***4(B): VIEW 2***

***4(C): SPHERE***




***4(C): VIEW 1***




***4(C): VIEW 2***