Mesh Normalization, Quantization & Error Analysis

Mesh Normalization, Quantization & Error Analysis
Student: [Your Name]
Assignment: SeamGPT Data Processing
Date: [fill date]

1. Introduction
The assignment focuses on preprocessing 3D meshes (vertices only): normalization, quantization, and reconstruction with
2. Methods

Min–Max normalization
Unit-Sphere normalization
Quantization (n_bins = 1024)
Adaptive quantization (k-NN density → buckets)

3. Results
Place here the observations and refer to plots saved under output/<mesh>/plots/.
4. Reconstruction error
Summaries (example placeholders):
- Min–Max MSE: ...
- Unit-Sphere MSE: ...
- Adaptive quantization effect: ...
5. Discussion and Conclusion
(Add your short conclusions, 5–10 lines)
Image: cube_minmax_l2hist.png

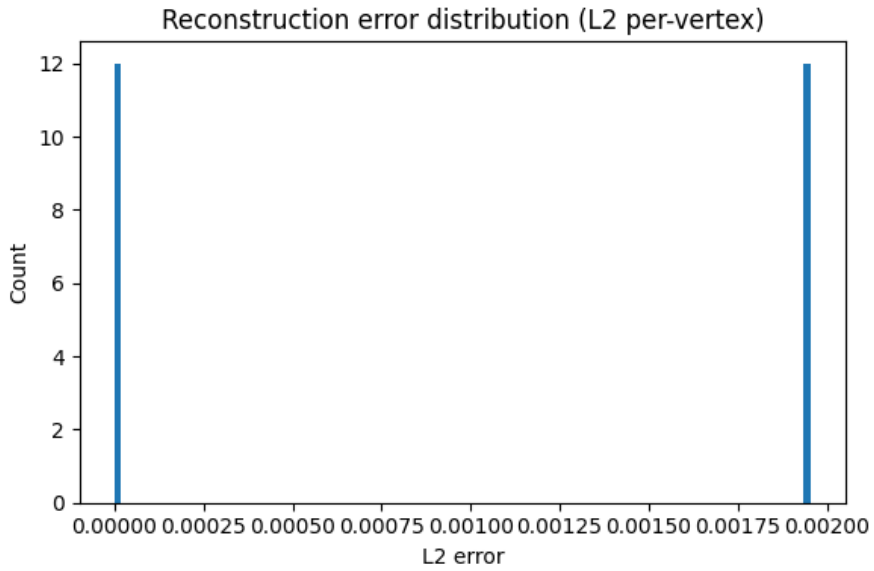

Image: cube_minmax_mae_axis.png

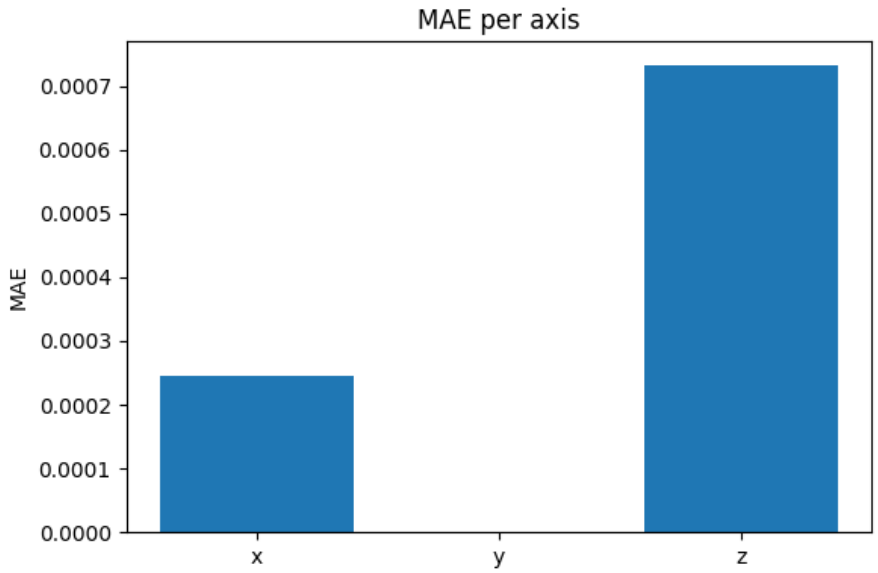

Image: cube_minmax_mse_axis.png

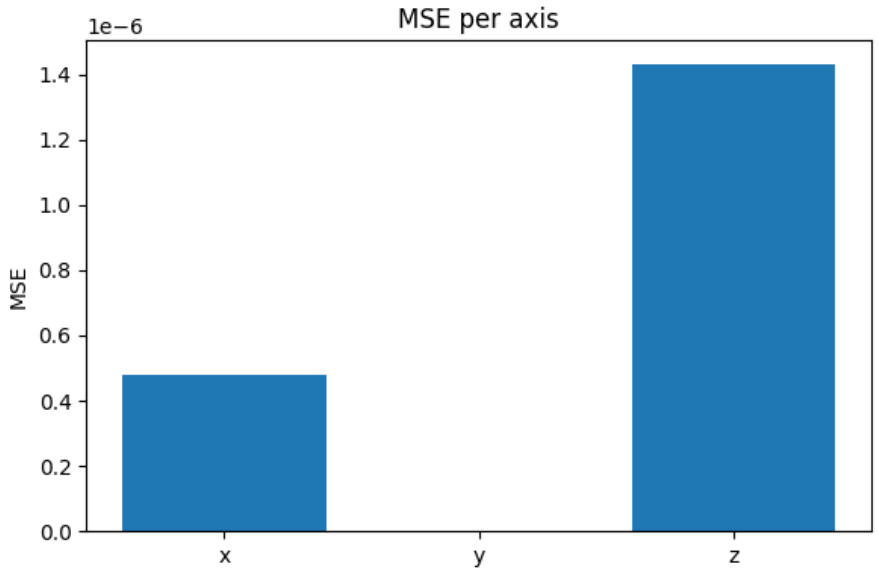

Image: cube_unit_sphere_l2hist.png

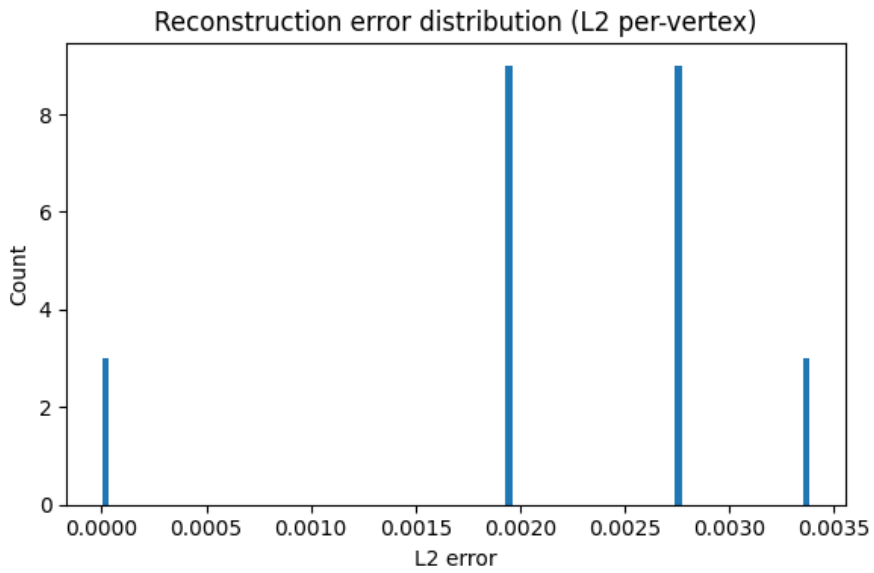

Image: cube_unit_sphere_mae_axis.png

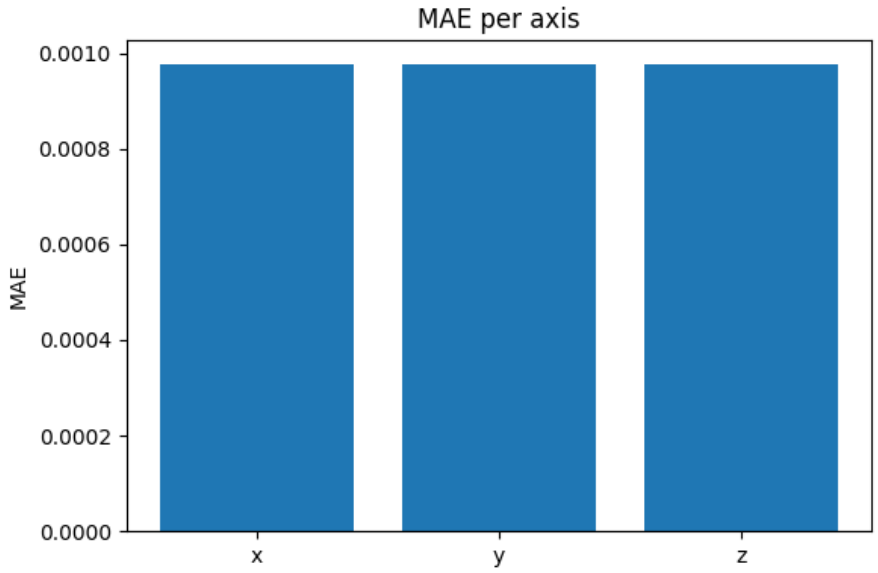

Image: cube_unit_sphere_mse_axis.png