

# CS-562 Project4 Assignment Report

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For this assignment, I mainly implemented Ambient Occlusion and Bilateral blur filter

This is the instruction for each feature's implemented code files or line numbers.

1. Ambient Occlusion:

- SampleScene.cpp with 722~754 line
- In shaders file - ambientOcclusion.vert, ambientOcclusion.frag, lightStage.frag, 136~140 line

2. Bilateral blur filter:

- SampleScene.cpp with 515~537 line, 756~828 line.
- In shaders file - computeAOVertical.comp, computeAOHorizontal.comp

+ ) It takes a little bit taking time to start the project. Because I used a high polygon obj file of the Bunny model.

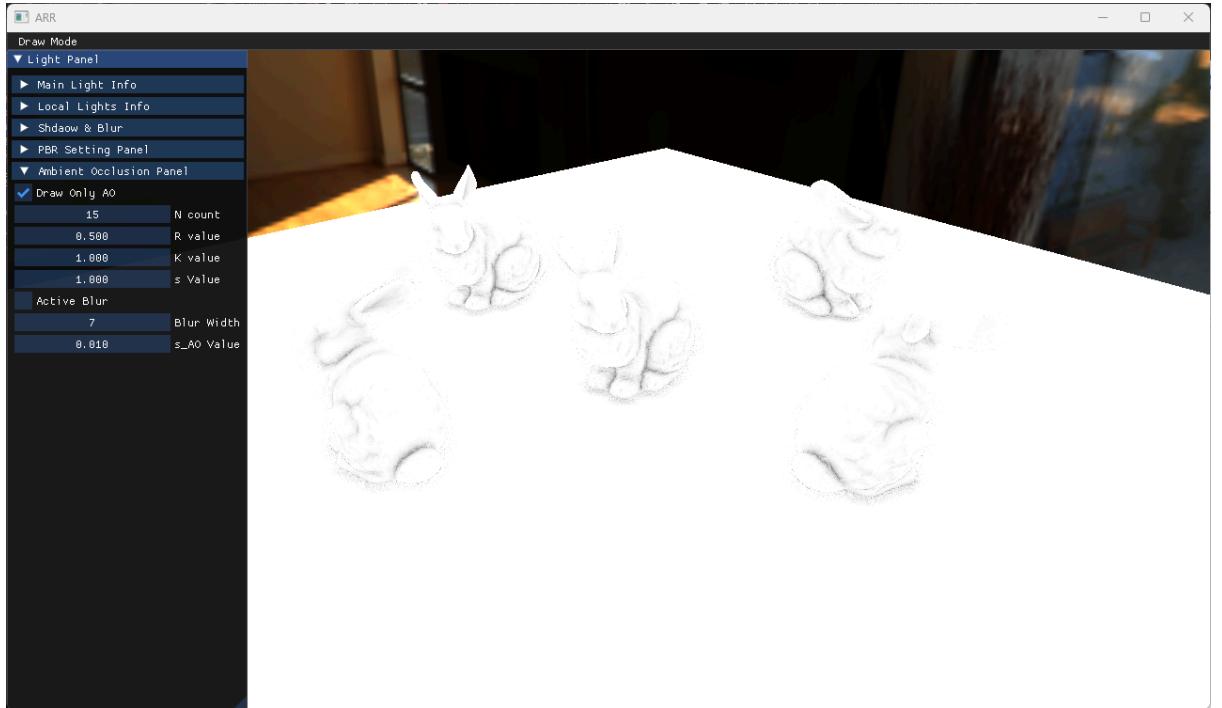
+ ) I set only the x64 version.

## Implementations:

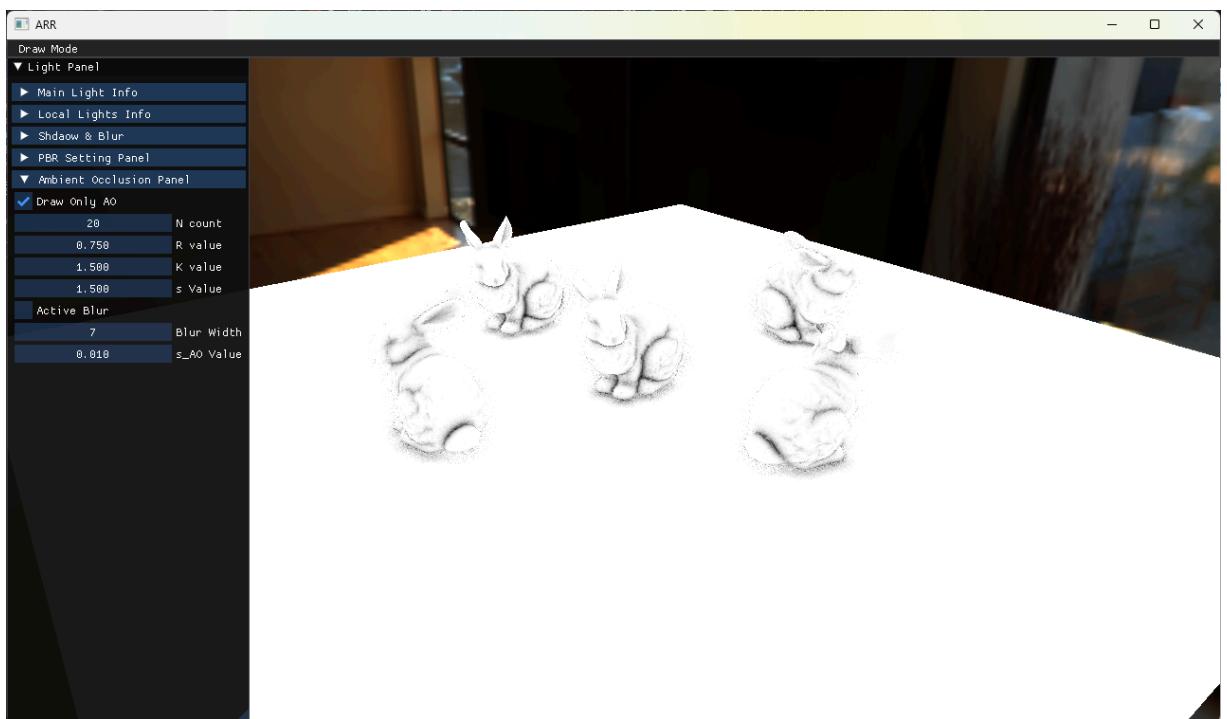
- Ambient Occlusion
- Bilateral blur filter

## Only Ambient Occlusion without blur:

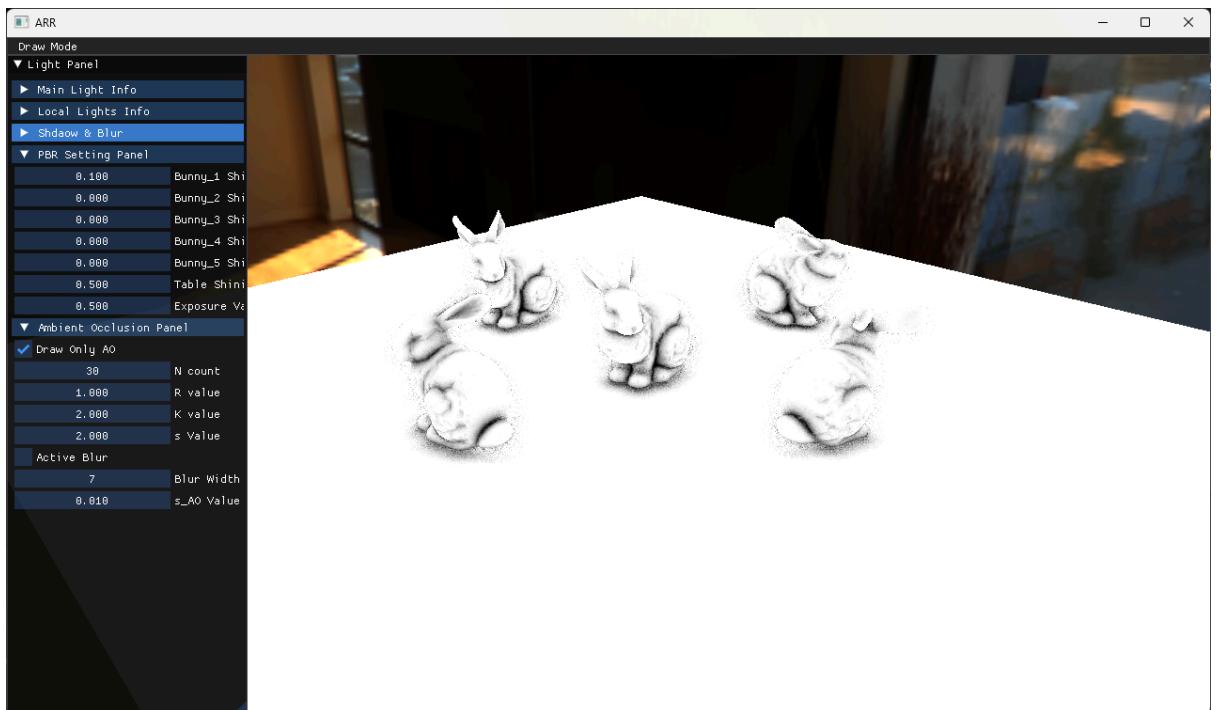
1.  $N=15, R=0.5, k=1.0, s=1.0$



2.  $N=20, R=0.75, k=1.5, s=1.5$

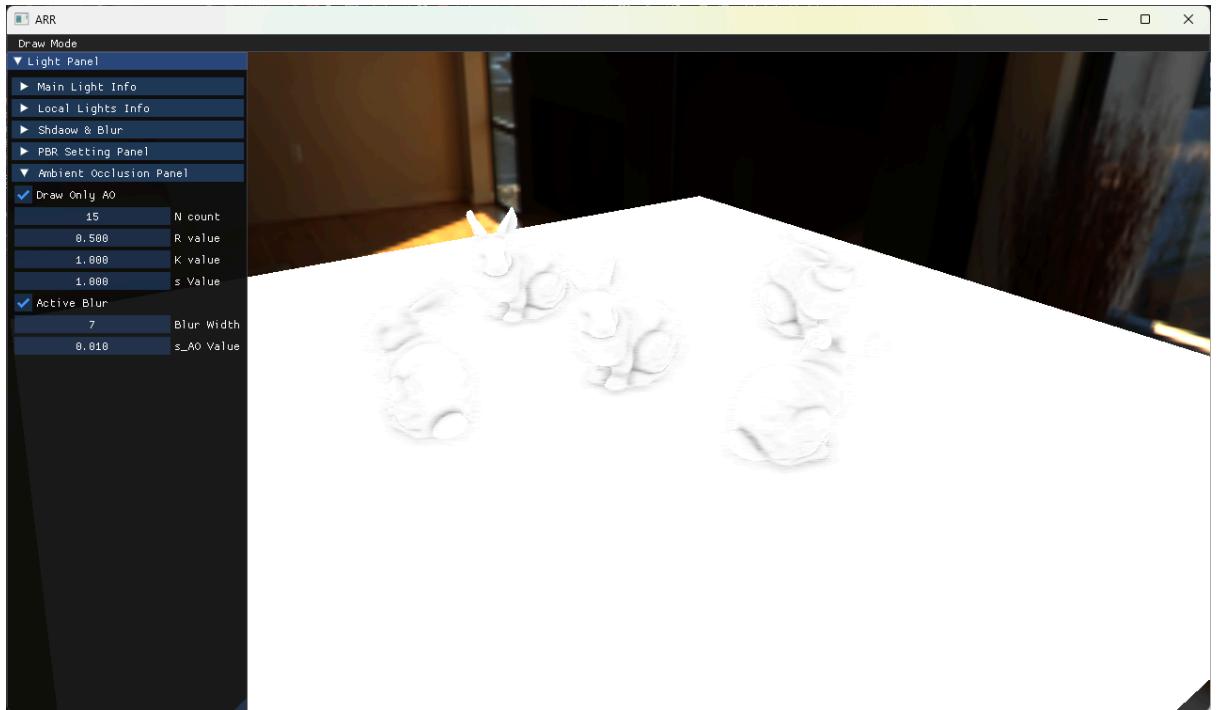


3.  $N=30, R=1.0, k=2.0, s=2.0$



## Only Ambient Occlusion with blur:

1.  $N=15, R=0.5, k=1.0, s=1.0$



2.  $N=20, R=0.75, k=1.5, s=1.5$



3.  $N=30, R=1.0, k=2.0, s=2.0$



4.  $3 + \text{Change Blur width and } s \text{ factor}$



## Total Result (IBL + AO + Blur)

