 Delt06	Fix incorrect matcap UV calculation	d0013c8 · 18 days ago	63 commits
Assets	Fix incorrect matcap UV calculation	18 days ago	
Documentation	Fix incorrect matcap UV calculation	18 days ago	
Packages	Implement mesh generation via job system and burst	last month	
ProjectSettings	Implement mesh generation via job system and burst	last month	
.editorconfig	Initial commit: fog skybox and blob shadows	last month	
.gitattributes	Initial commit: fog skybox and blob shadows	last month	
.gitignore	Initial commit: fog skybox and blob shadows	last month	
LICENSE.md	Create LICENSE.md	last month	
README.md	Finalize toon terrain	21 days ago	

README.md

# Unity Graphics

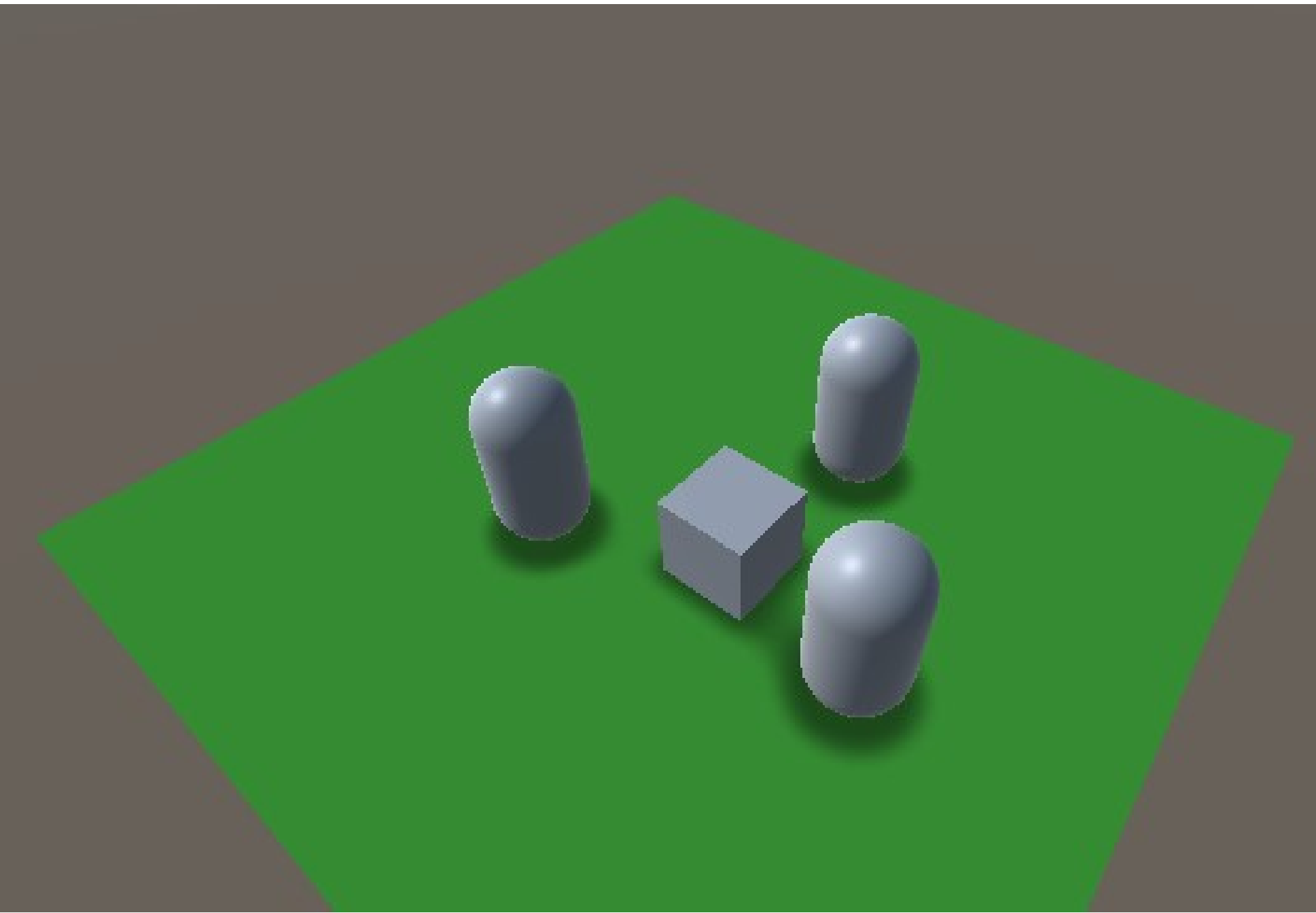
A collection of URP shaders and render features.  
Developed and tested with Unity 2020.3.16f1 and URP 10.5.1.

## Fog Skybox



A skybox shader that blends with fog.

## Blob Shadows



A render feature that adds support for blob shadows:

- Either circle or box shape
- Can be used as primitive AO
- Includes an example shader that supports receiving blob shadows (an extension of [Toon Shader Lite](#))

## Performance

- Measured on Snapdragon 845 via Unity's GPU Profiler (OpenGL ES)
- Setup: ~20 capsules
- **Blob Shadows:**
  - All circles
  - Resolution per unit = 8 (further increase does not improve visual quality)
  - Shadow Distance = 15
- **Shadow Maps:**
  - Shadow Resolution = 256
  - Shadow Distance = 20
  - Soft Shadows On
  - 1 Cascade

Note: sampling shadow maps when rendering shadow receivers is **NOT** taken into account.

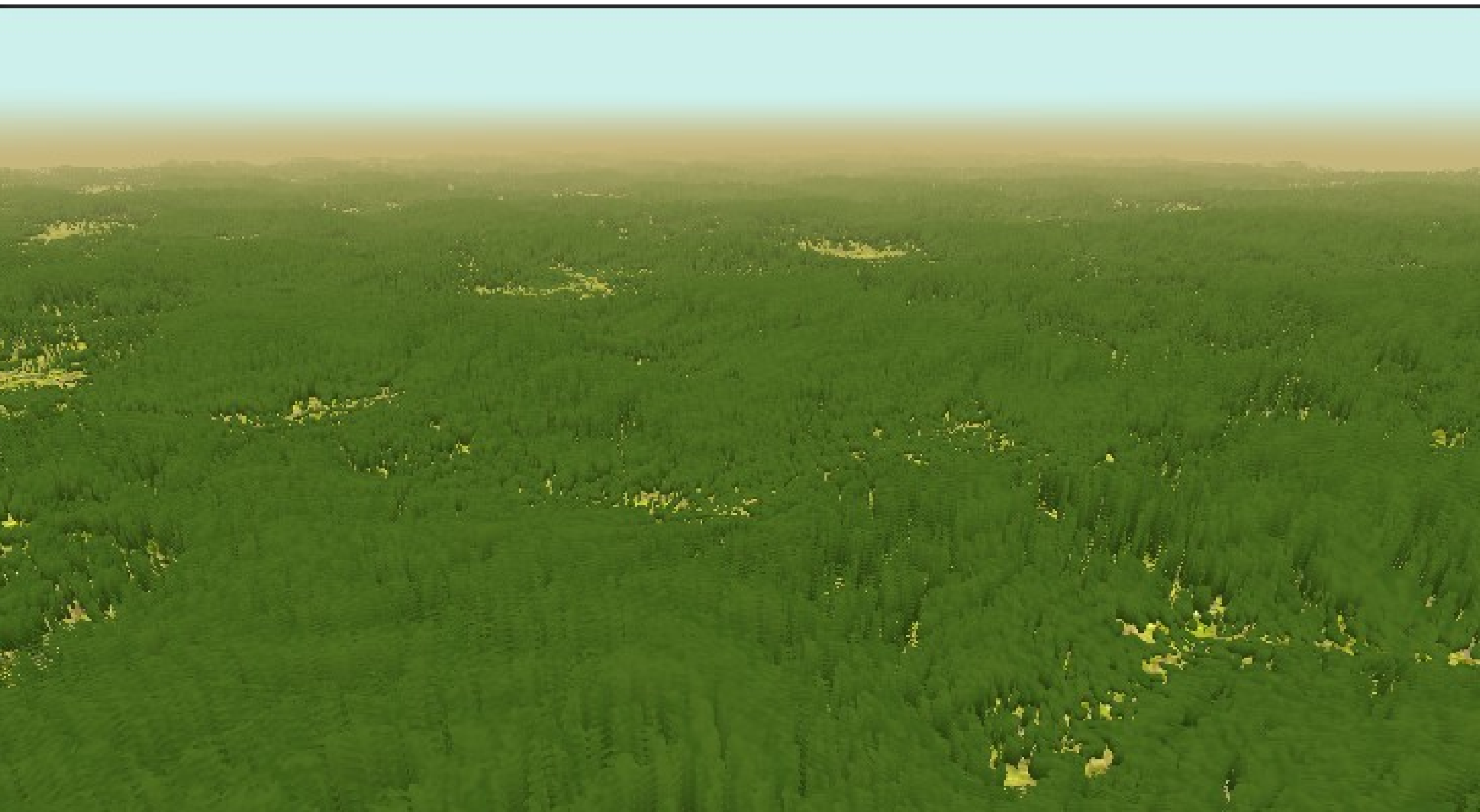
Results (in ms):

- **Blob:** 0.08 (Submit) + 0.21 (Render) = **0.29**
- **Shadow Maps:** 0.05 (Setup) + 0.21 (PrepareDrawShadows) + 0.21 (Submit) + 0.13 (Render) = **0.6**

## Drawing

Runtime drawing on the GPU side with configurable brush (color, size, hardness).

## Layered Grass



Grass shader made with the technique that is typically used for fur ([Reference](#)).

Warning: the shader has poor performance on both mobile and desktop platforms. It is only a technical demo, which might not be suitable for production even if further optimized.

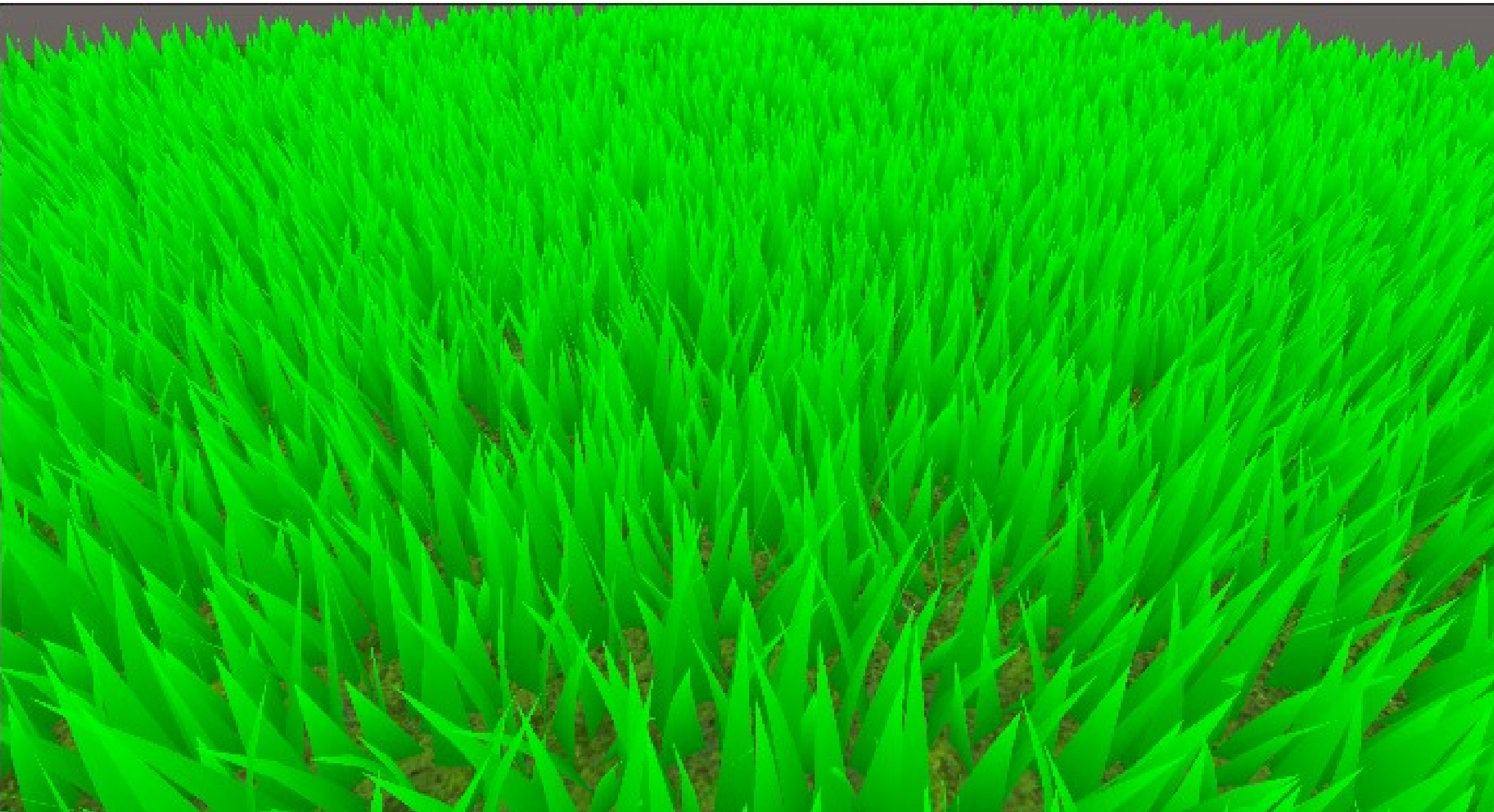
## Billboard Grass



Billboard grass shader:

- Automatic random spread
- Per-chunk frustum culling (in the screenshot above, chunk size is 15x15)
- LOD system: the further the grass chunk from the camera, the sparser it is

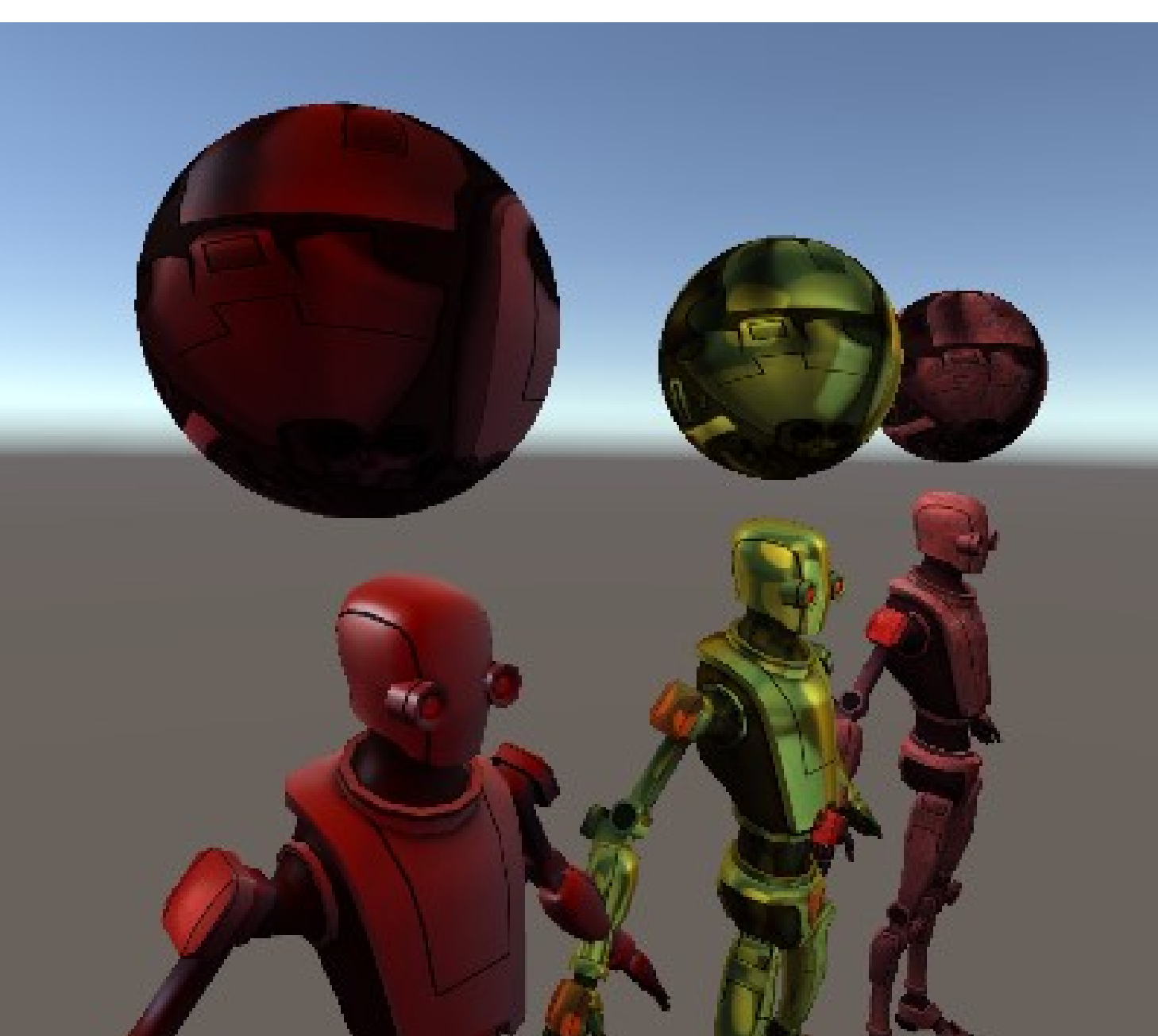
## Geometry Grass



Grass implemented with geometry shader:

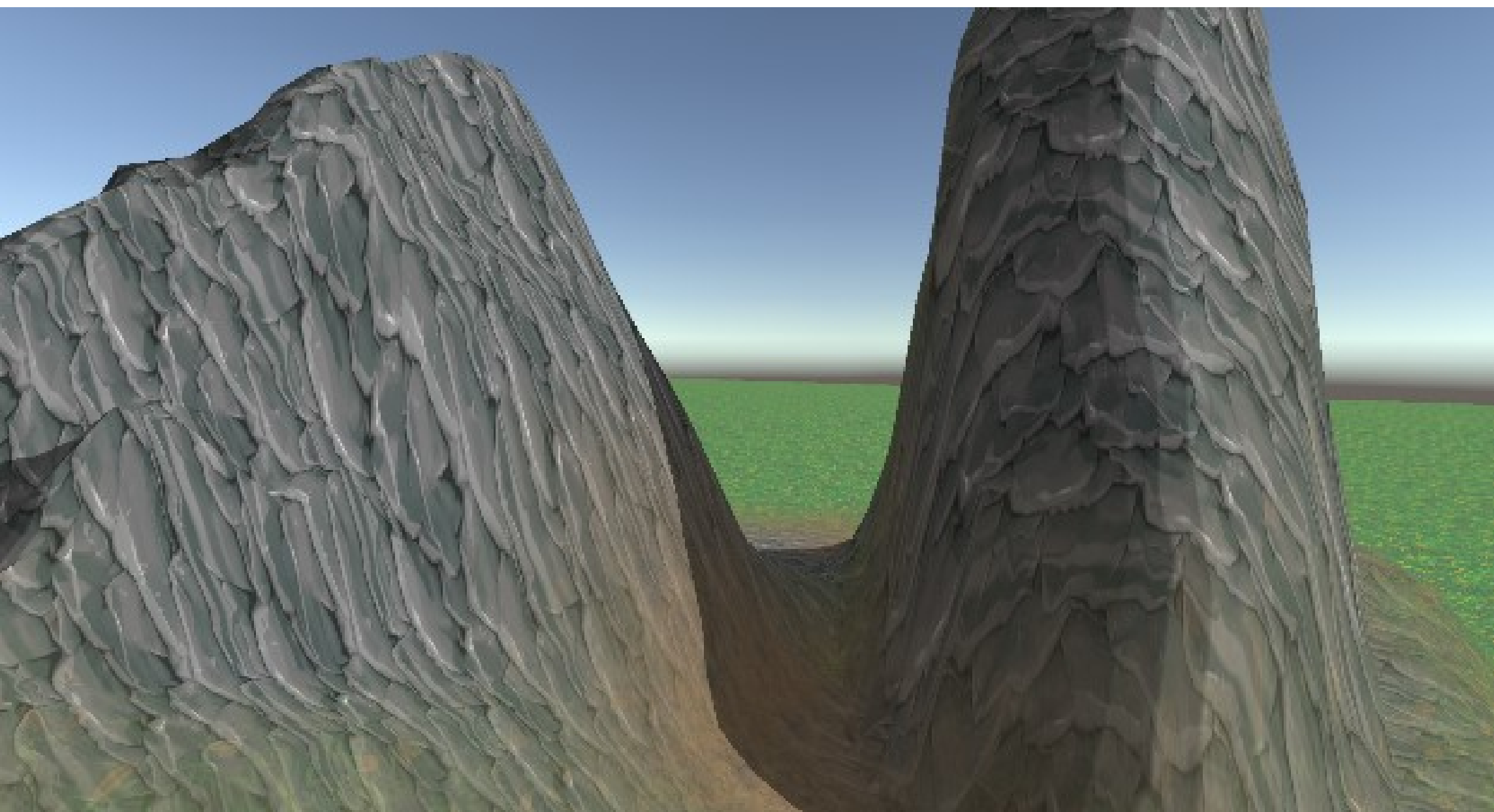
- Grass placement mesh is generated via Job System
- Automatic LOD system implemented in the geometry shader (controlled via material properties)
- Based on [this tutorial](#)

## Matcap



Basic Matcap shader. Matcap textures are taken from [this repo](#).

## Toon Terrain



Lightweight toon terrain shader.

- Configurable ramp (specified as a texture)
- Shadow casting and receiving
- 4 layers (splats) max

## About

A collection of URP shaders and render features.

unityrenderingshaderrenderurp

ReadmeMIT License1 star1 watching0 forks

## Releases

No releases published

## Packages

No packages published

## Languages

