

Noise exploration

Procedurally Generated
Textures Presentation

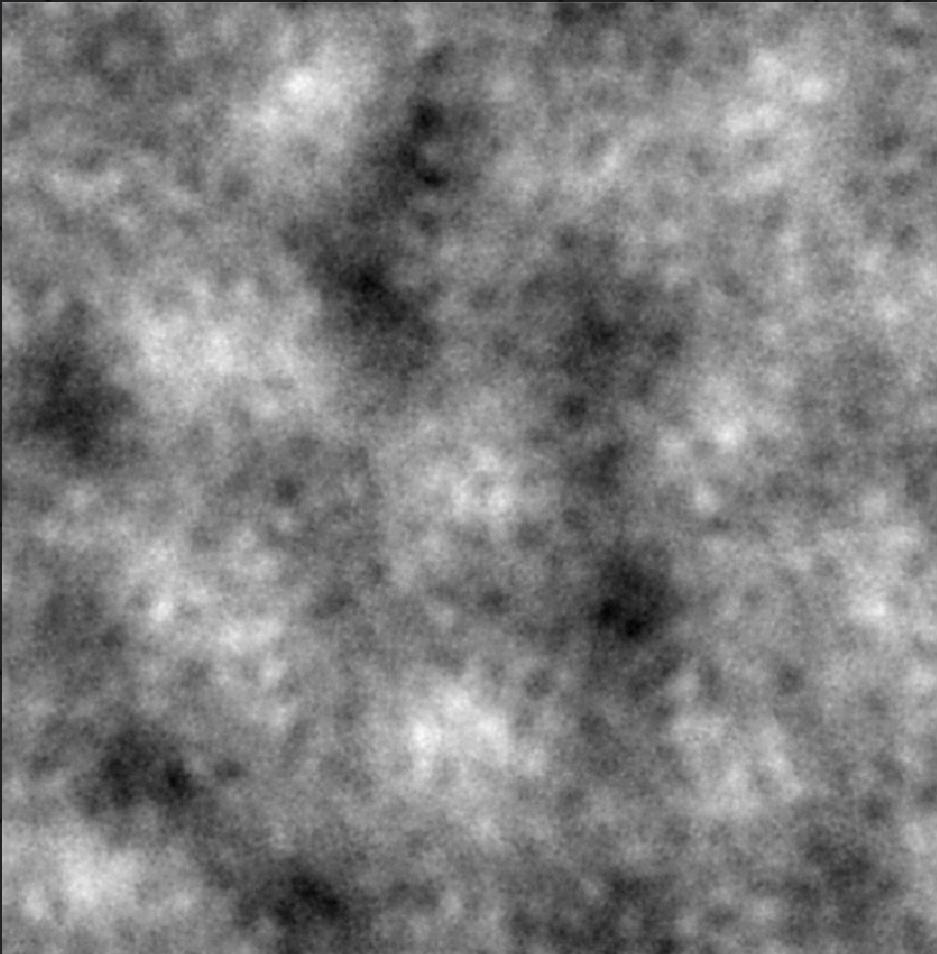
<https://github.com/Lerqiua/AI4Games-project>

Noises

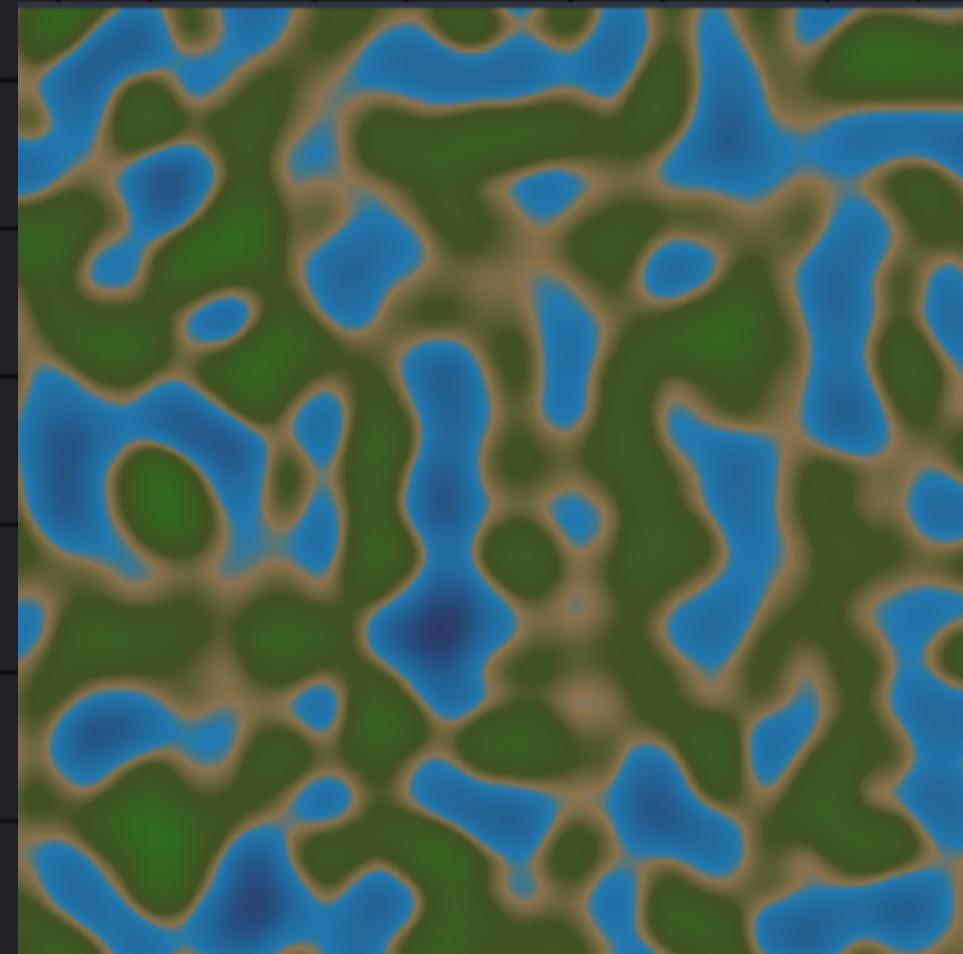
Noises are very popular amongst texture generation techniques. For the most part we used some combination of Perlin, Simplex or Worley noises

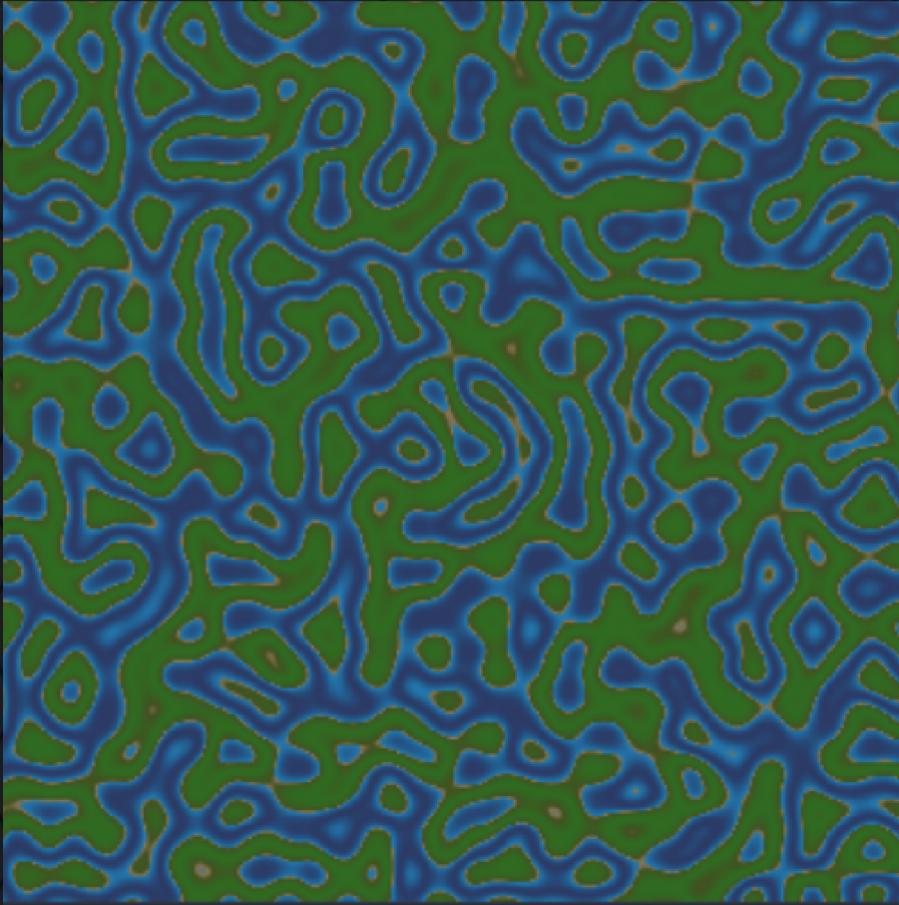
Great things have small
beginnings :)

Simple perlin



Color mapped

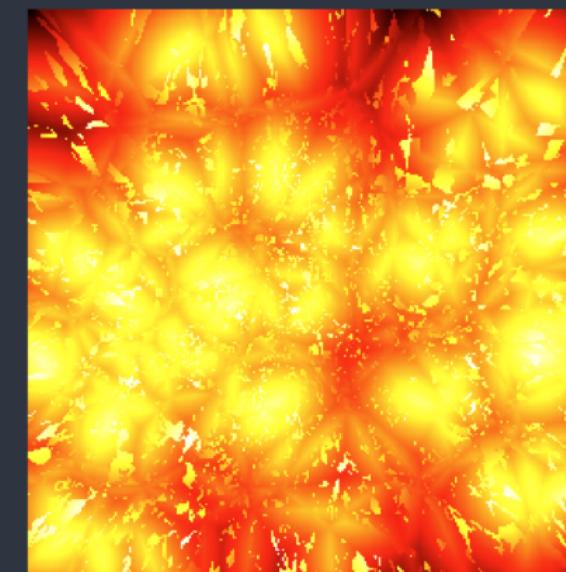
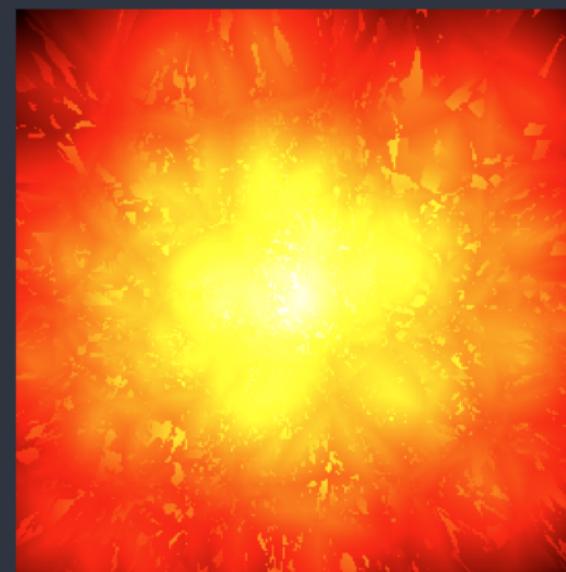
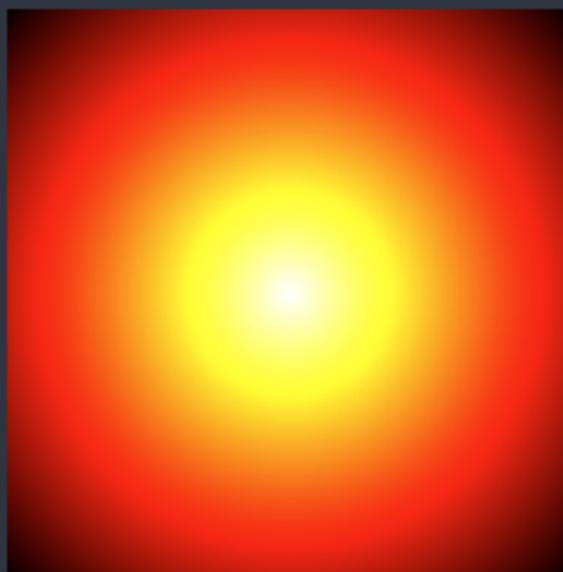




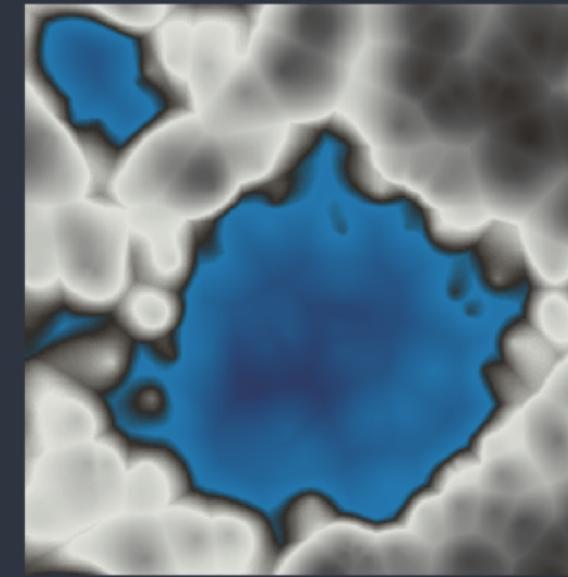
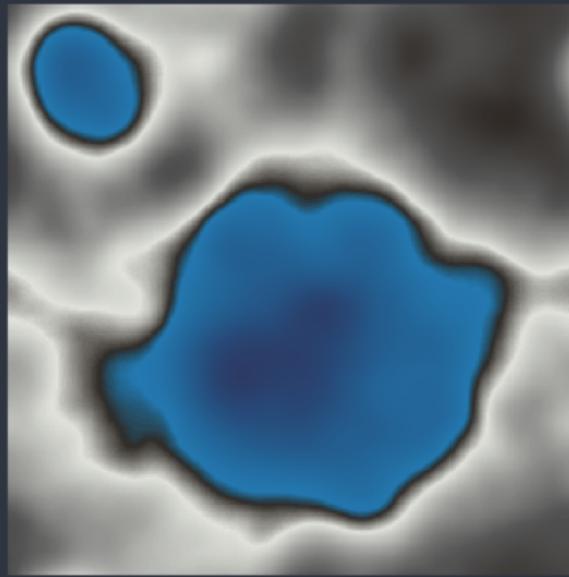
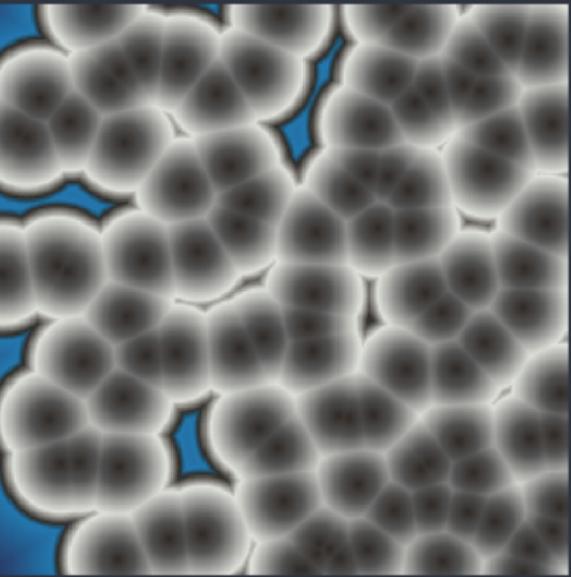
Swamps can be
generated by applying
sine function to the
perlin noise

Worley noise

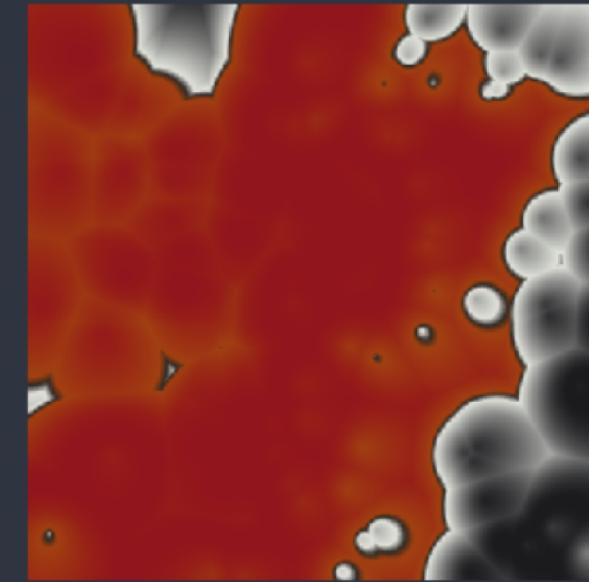
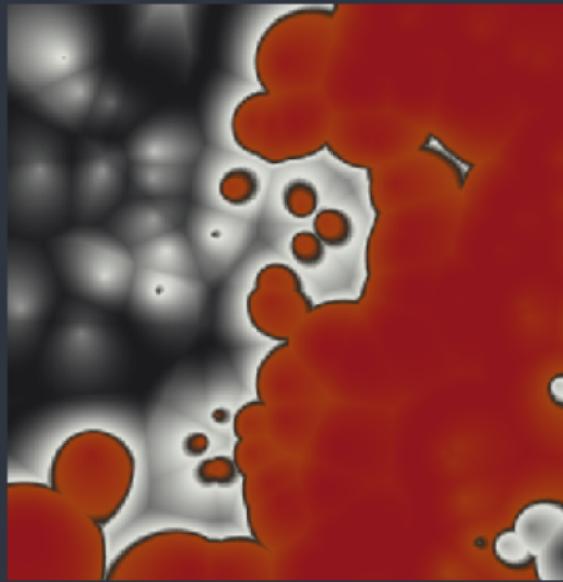
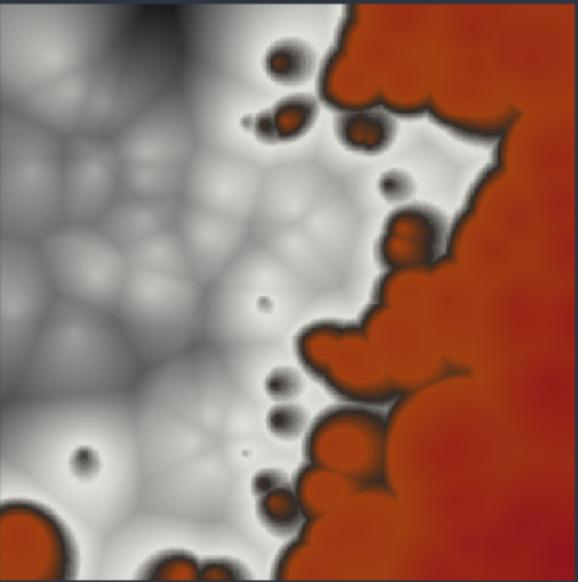
Generating explosions



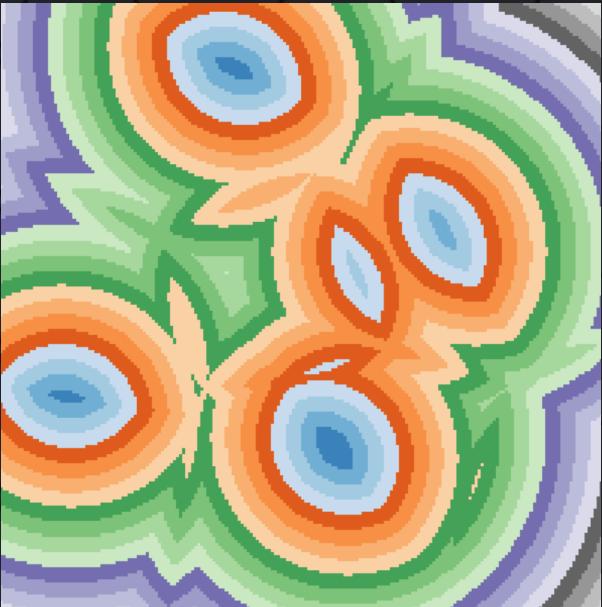
Snowpeaks



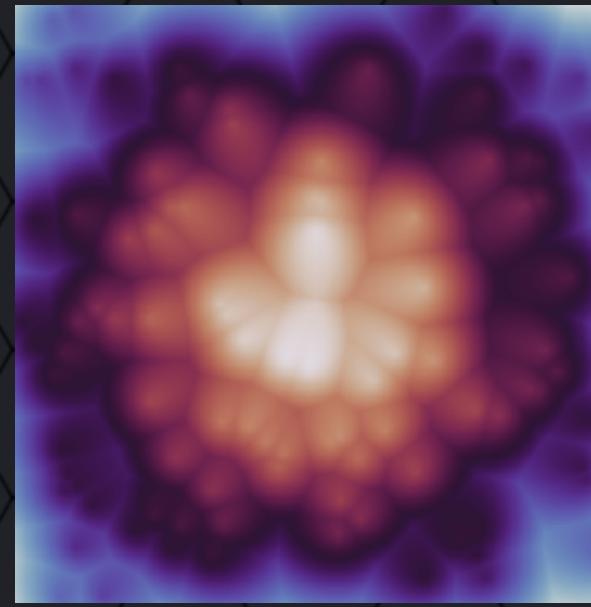
Lava lakes



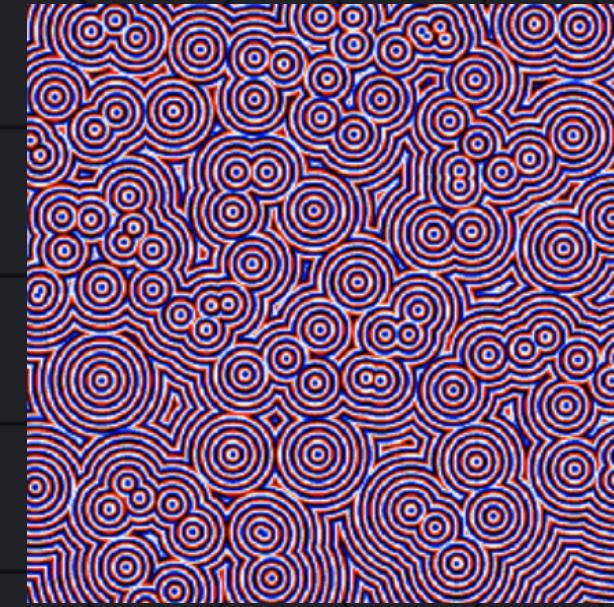
Fractalized



Centralized



Abstract



Vector Fields

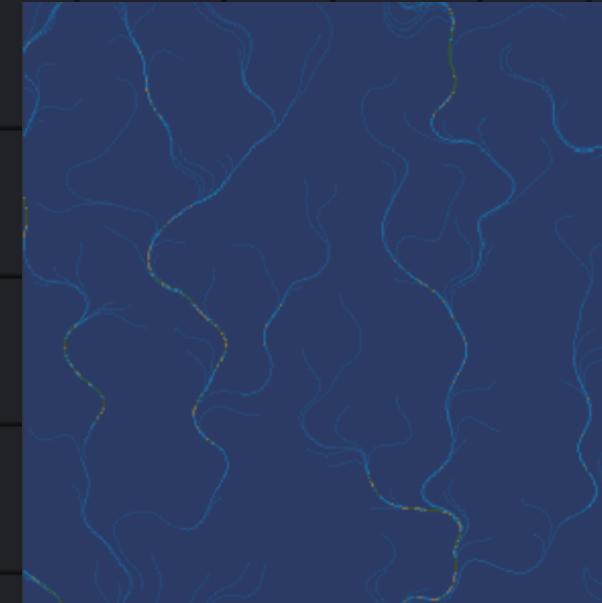
Pixel art

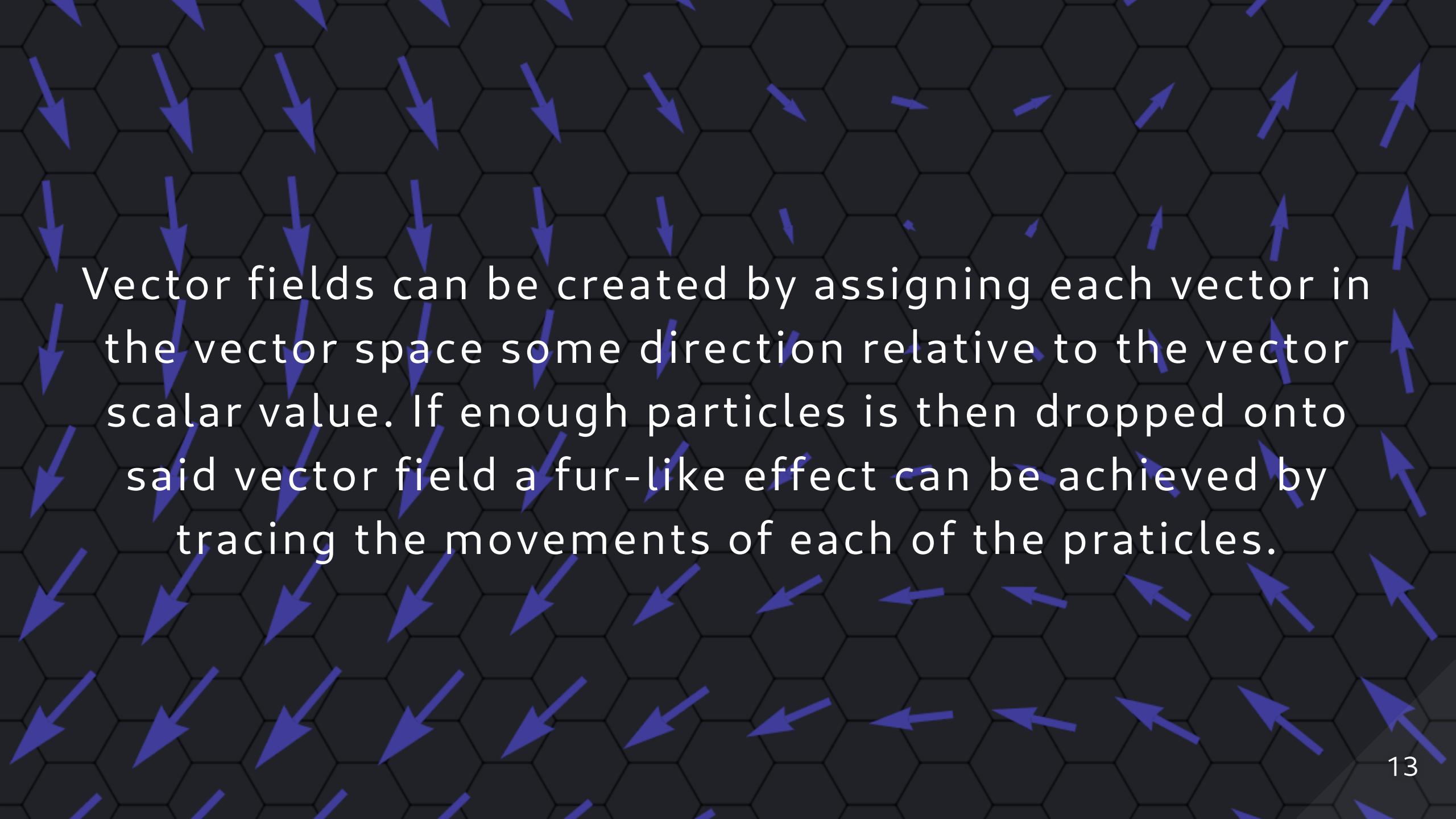


Feathers



Rivers

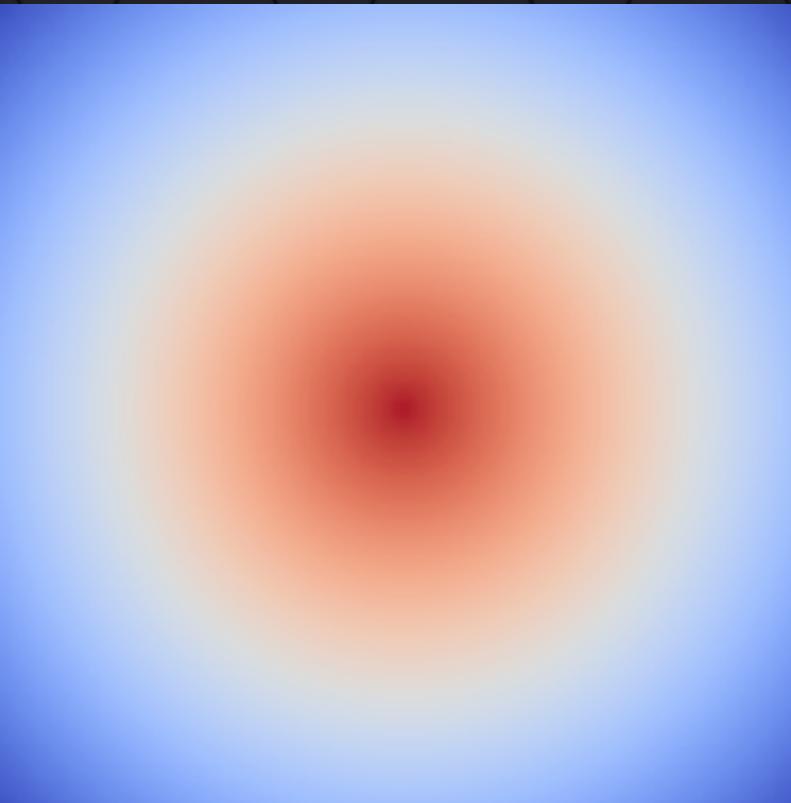




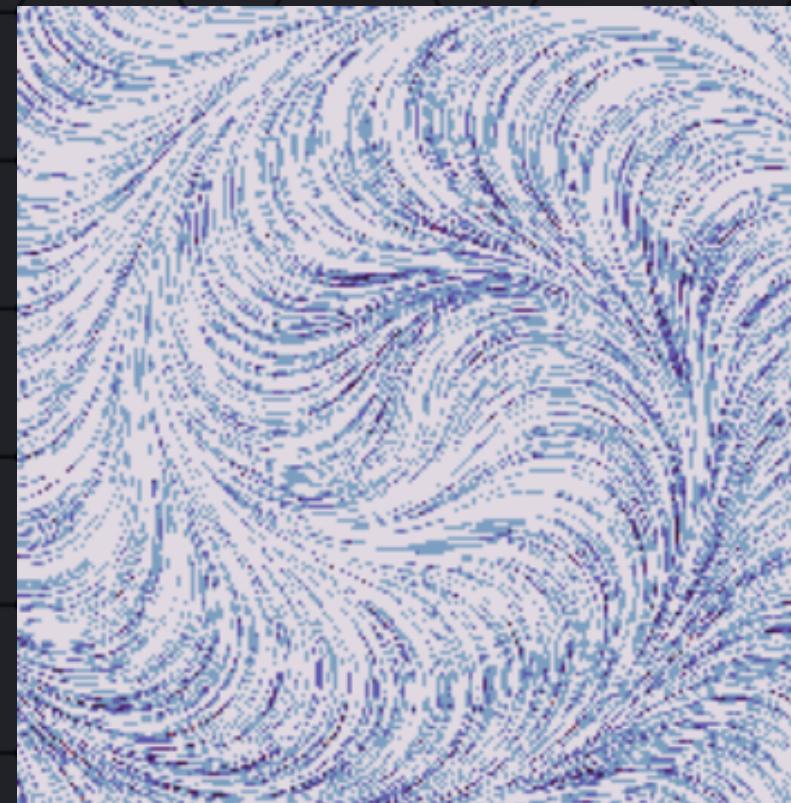
Vector fields can be created by assigning each vector in the vector space some direction relative to the vector scalar value. If enough particles are then dropped onto said vector field a fur-like effect can be achieved by tracing the movements of each of the particles.

Gravity well example

Centered mass



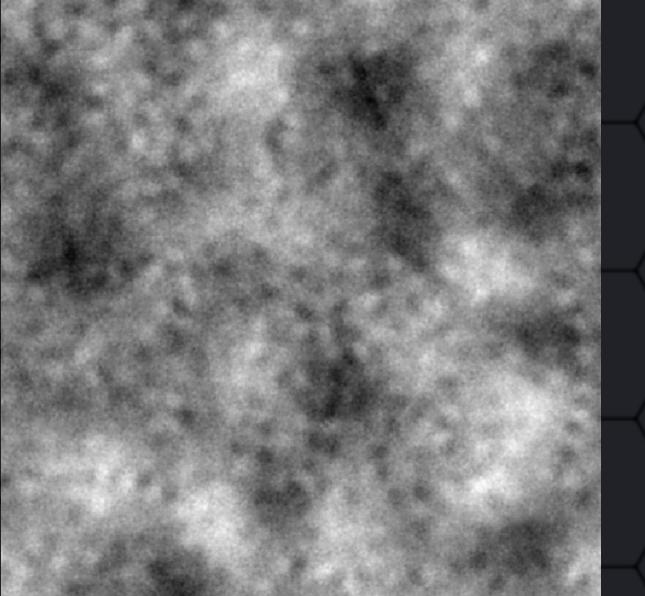
Vector field



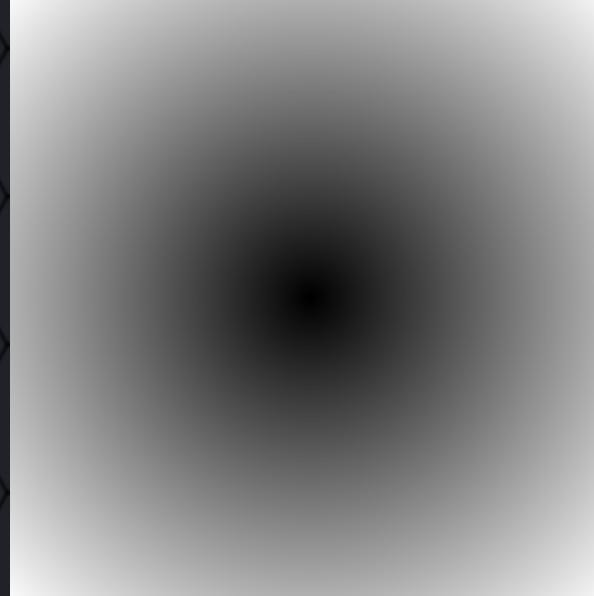


Simplex noise

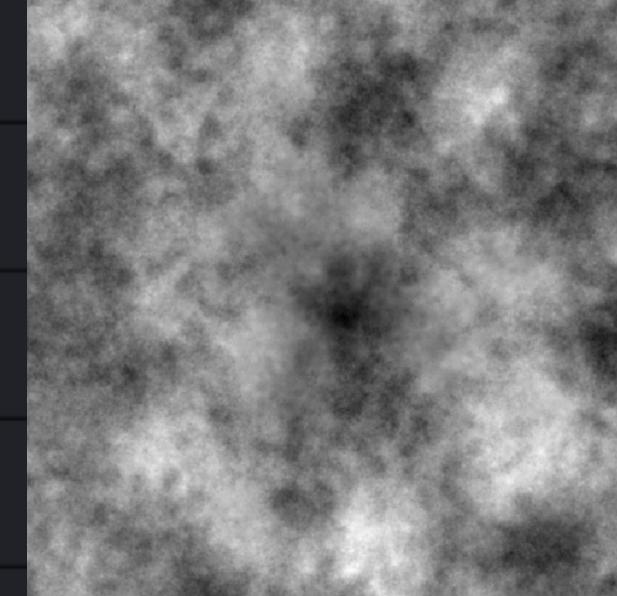
Simplex



Heat

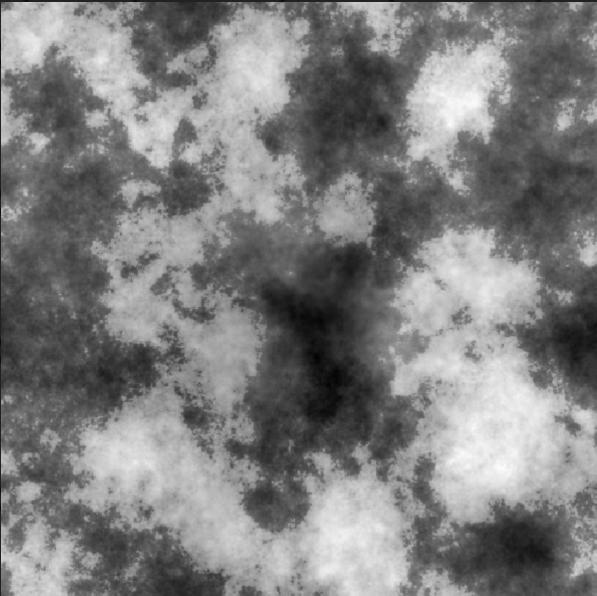


Result

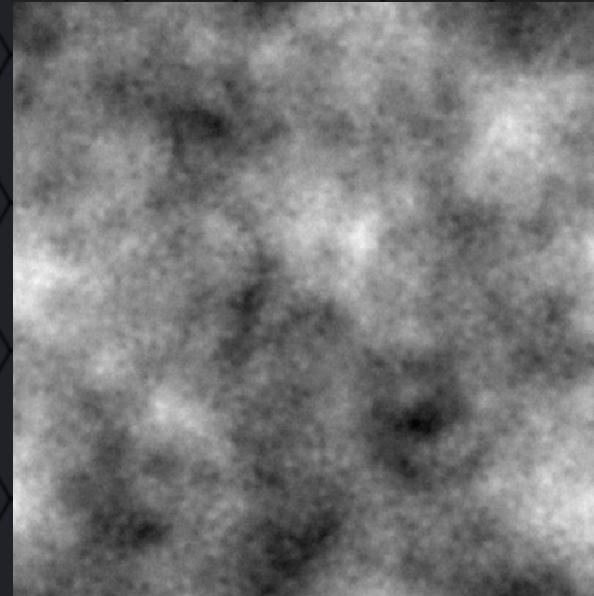


Moisture levels

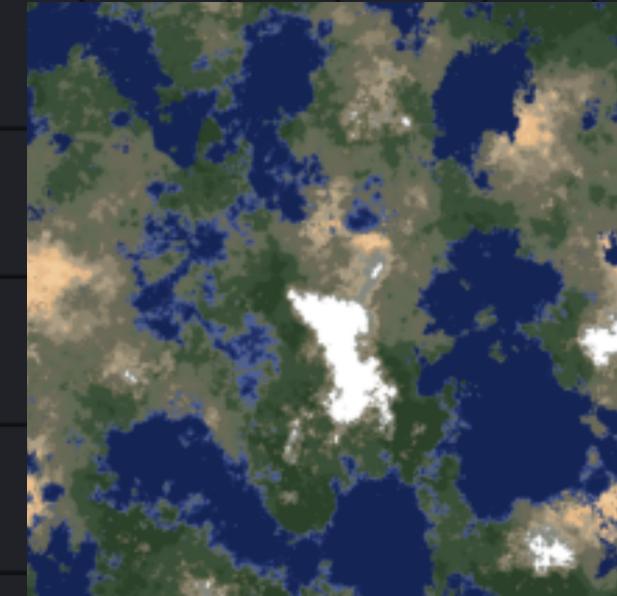
Height

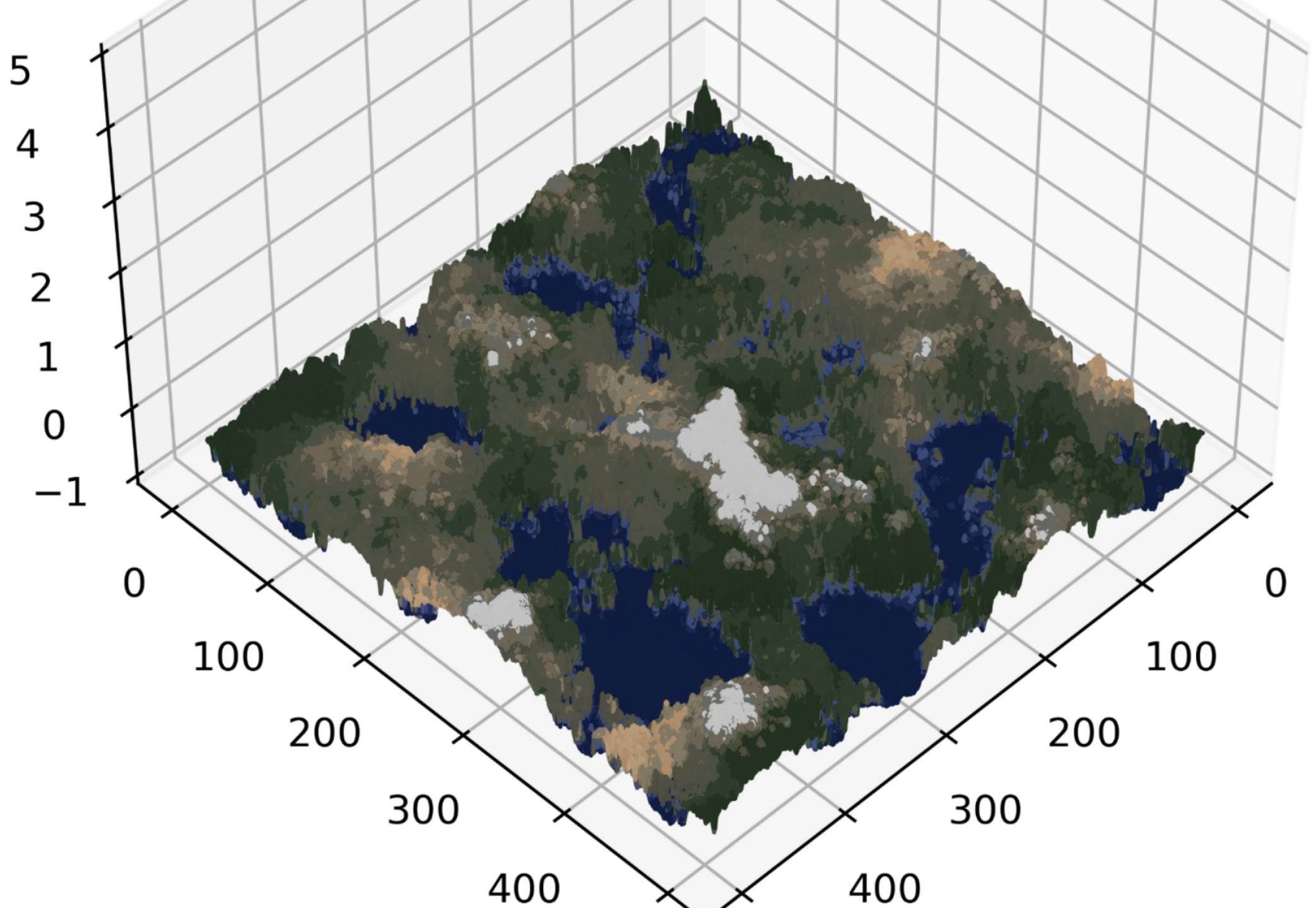


Moisture



Texture





END?