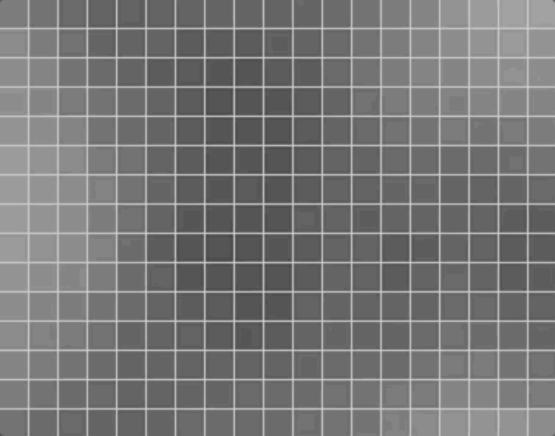
## Animated Flow Fields??

glm.simplex(Vec2(u, v))

## Where do we plug in time?

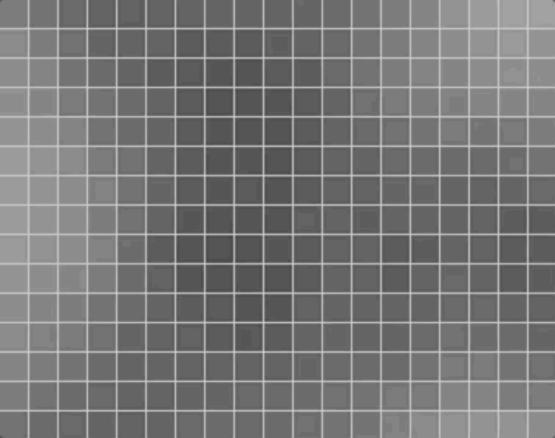


```
perlin/simplex(Vec3(...))
perlin/simplex(Vec4(...))
3D+ Noise
2D noise "slices" + 3rd/4th
```

dimension of time!







## Animated Flow Fields??

Where do we plug in time?

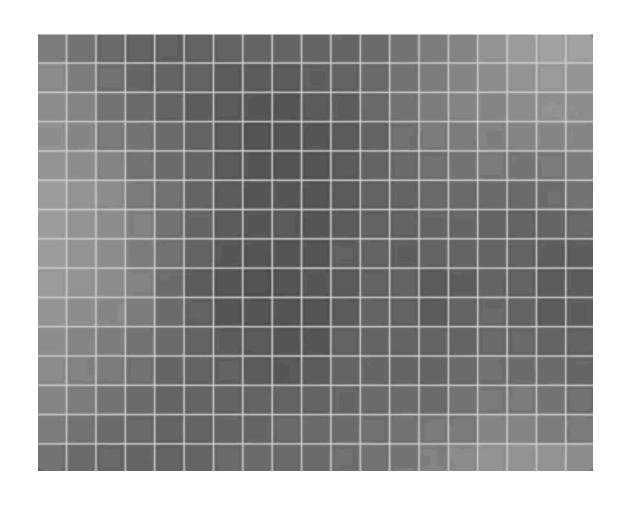
glm.simplex(Vec2(u, v))



perlin/simplex(Vec3(...))
perlin/simplex(Vec4(...))

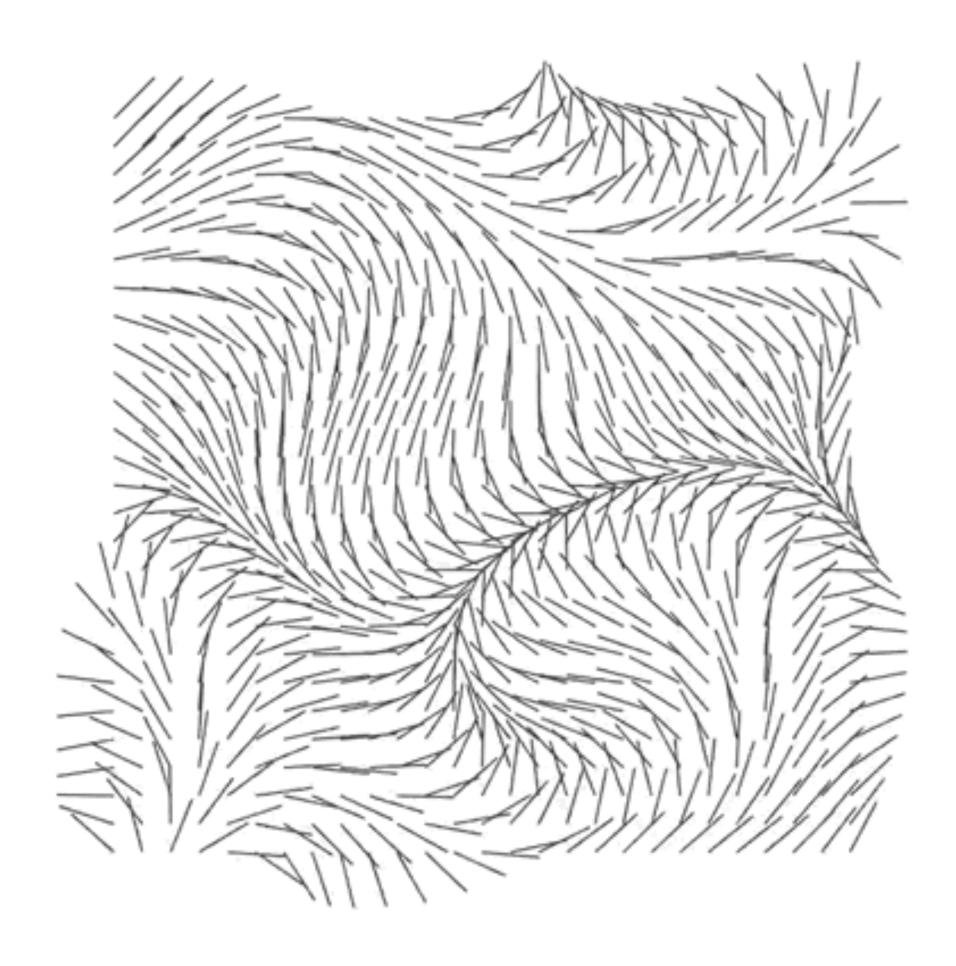
3D+ Noise

2D noise "slices" + 3rd/4th dimension of time!





## Animated Flow Fields!



```
val radians = glm.simplex(
 Vec4(
   X = U
    z = 5f * cos(TWO_PI * time / 20f),
    W = 5f * sin(TWO_PI * time / 20f)
> * TWO_PI
val endX = startX + (r * sin(radians))
val endY = startY + (r * cos(radians))
drawLine(
  start = Offset(startX, startY),
  end = Offset(endX, endY),
```