

**Festive
Fireworks!**



The Deal Team™



Preet Modi

"Particles
are my
passion."



Parth Deshpande

"The sky's
the limit!"



Arnav Mathur

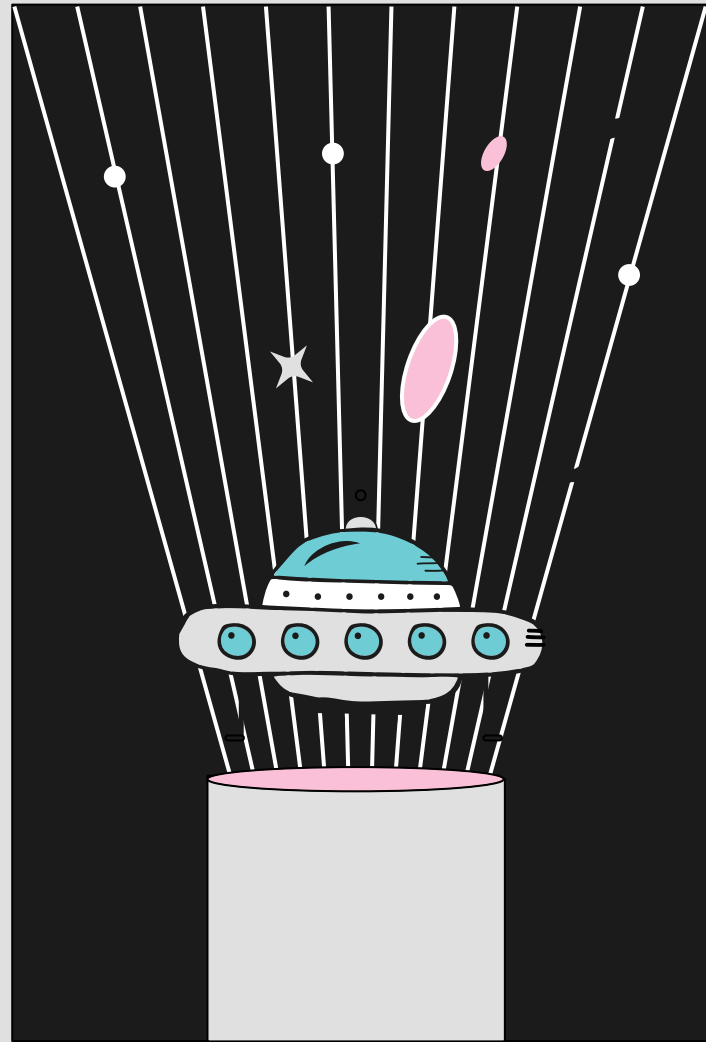
"Boom
boom"

Objectives

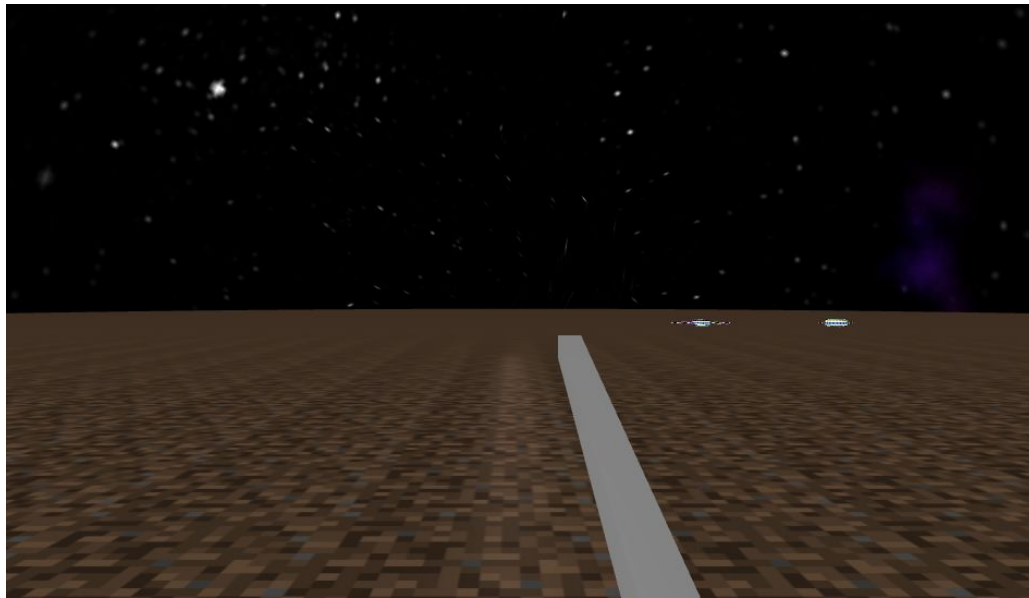
Replicating firework physics and animation
Interactivity with objects in the world
Camera dynamics

Features Implemented

A's for days ;)



World Movement



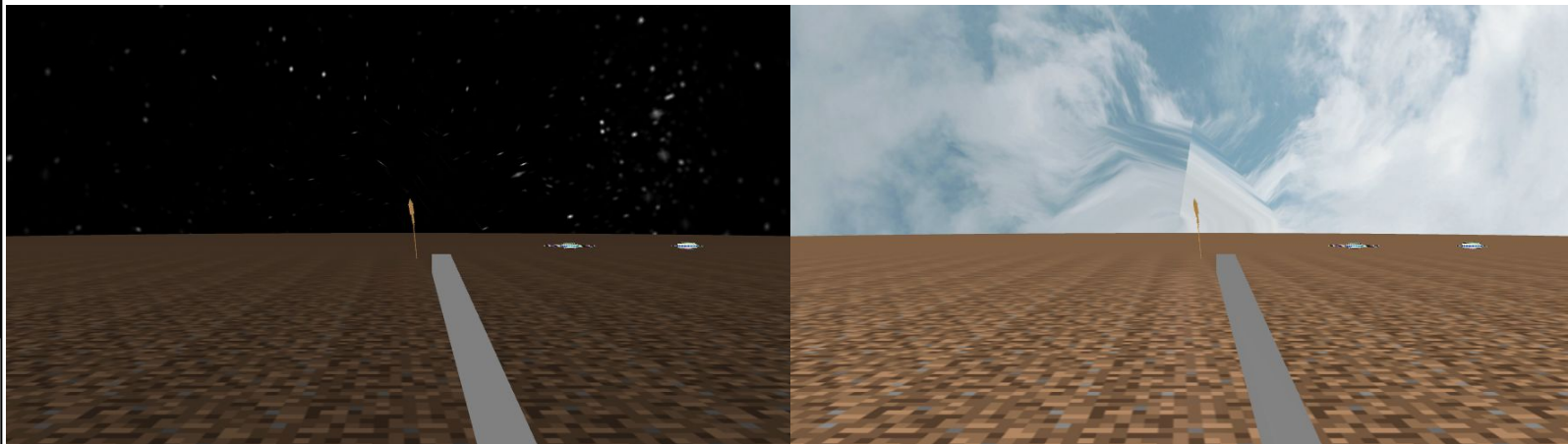
Physics Simulation



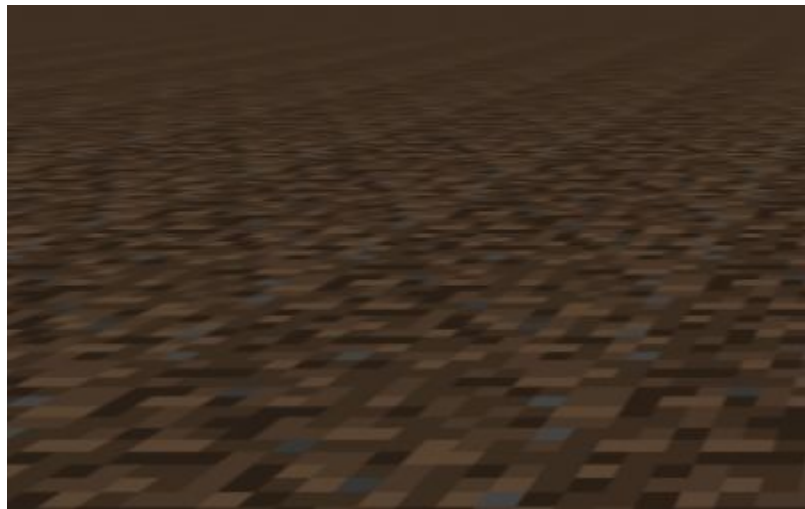
```
sproj(u,t)
{
  let s = (u*t)+0.5*(-9.81)*Math.pow(t,2);
  return Math.max(s,0);
}

vproj(u,t)
{
  let v = (this.sproj(u,t) +0.5*(-9.81)*Math.pow(t,2))/t
  return v
}
```

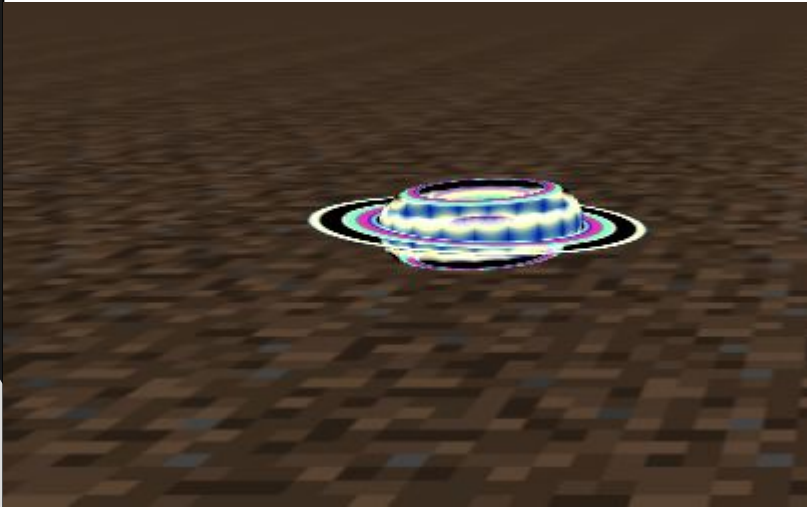
Skybox → Day/Night



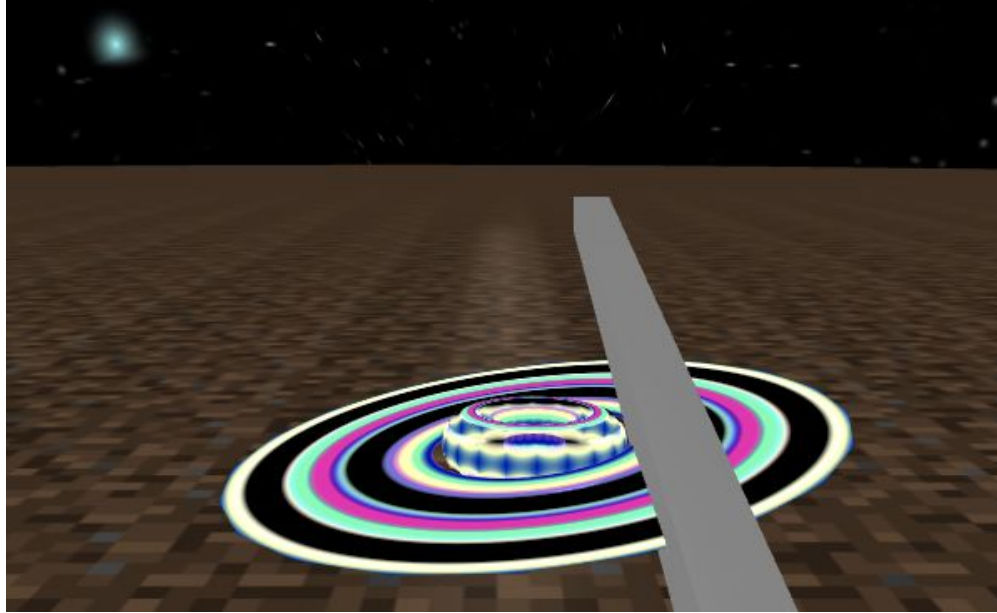
Ground (Minecraft Theme!!)



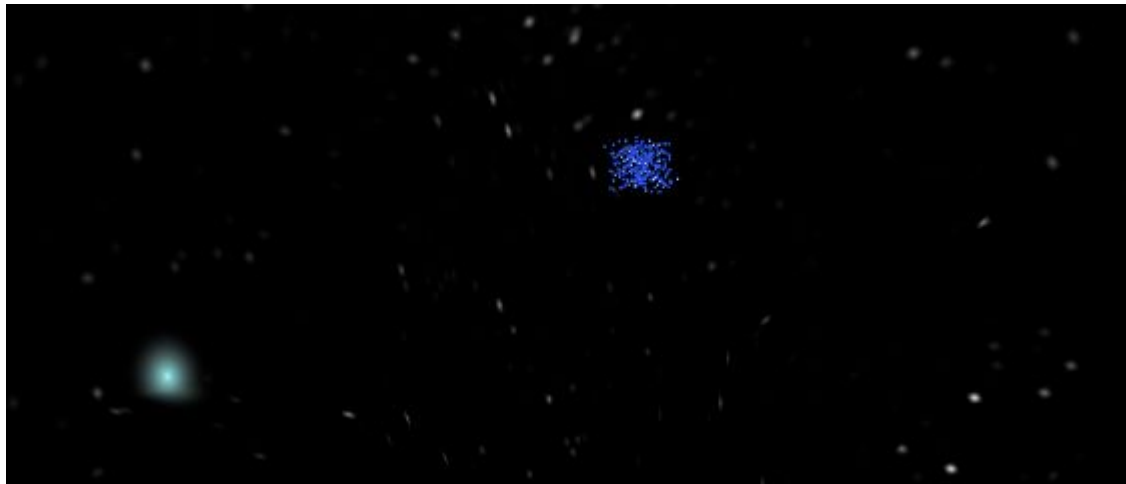
Ground Spinners (us vs. real life)

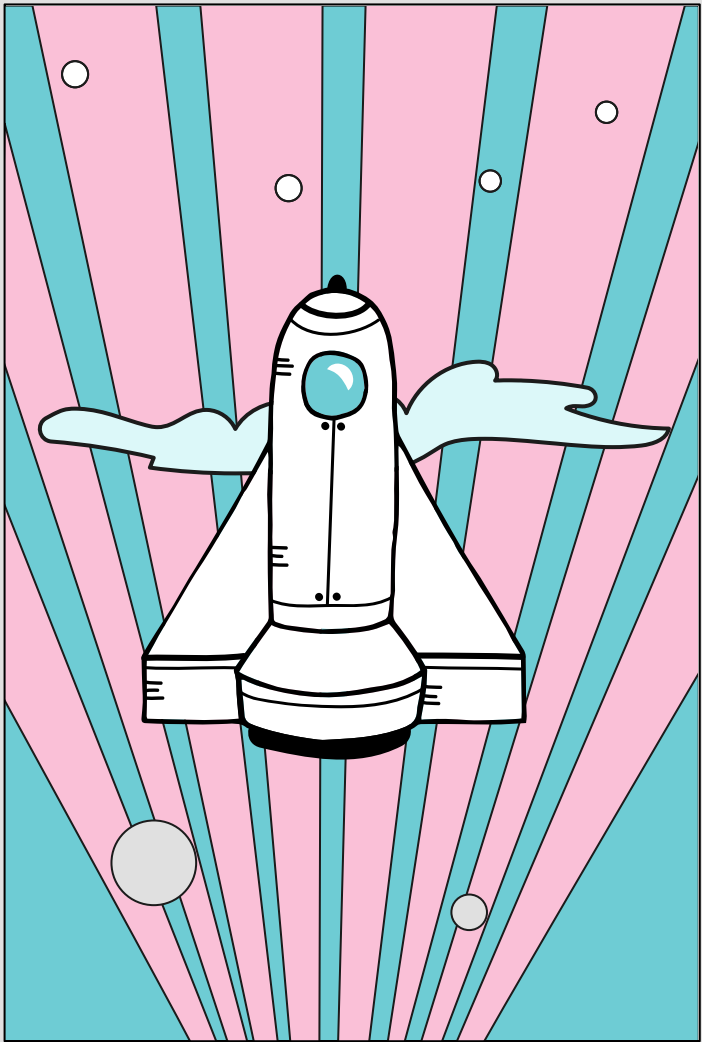


Collision Detection



Particles





Thank you, questions?