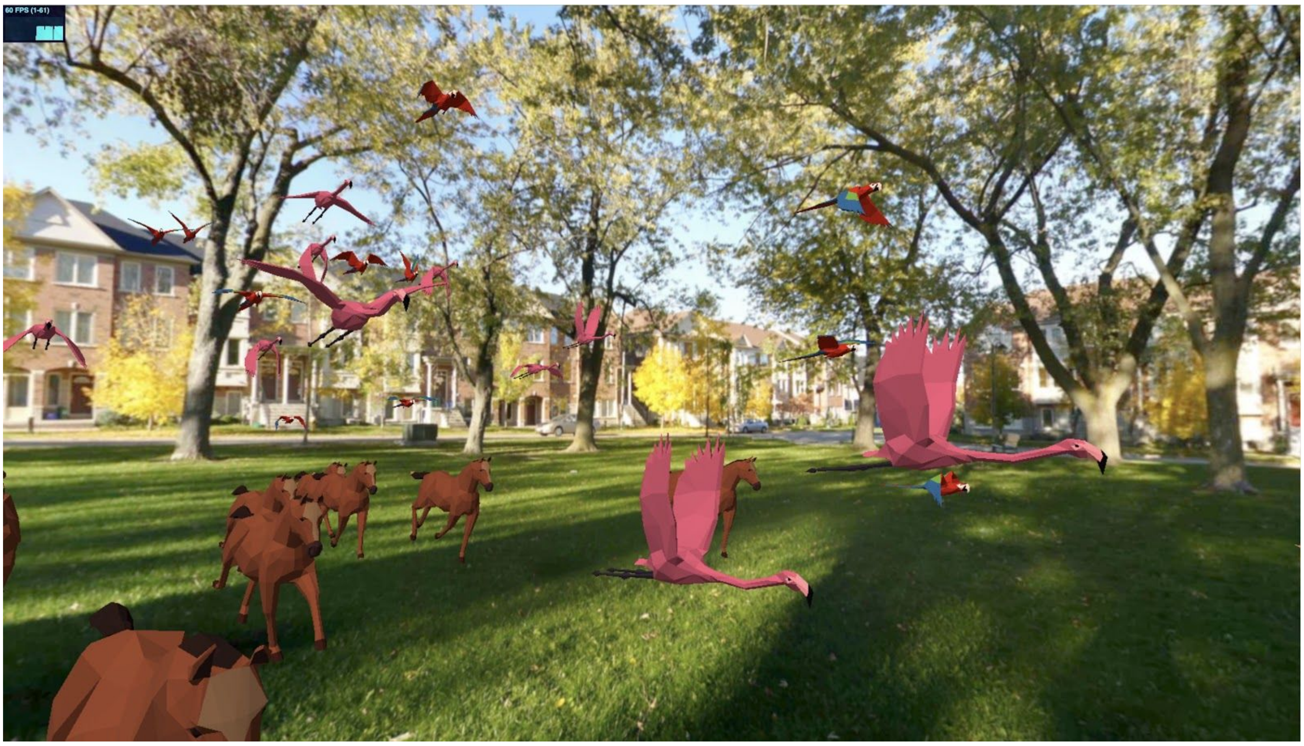
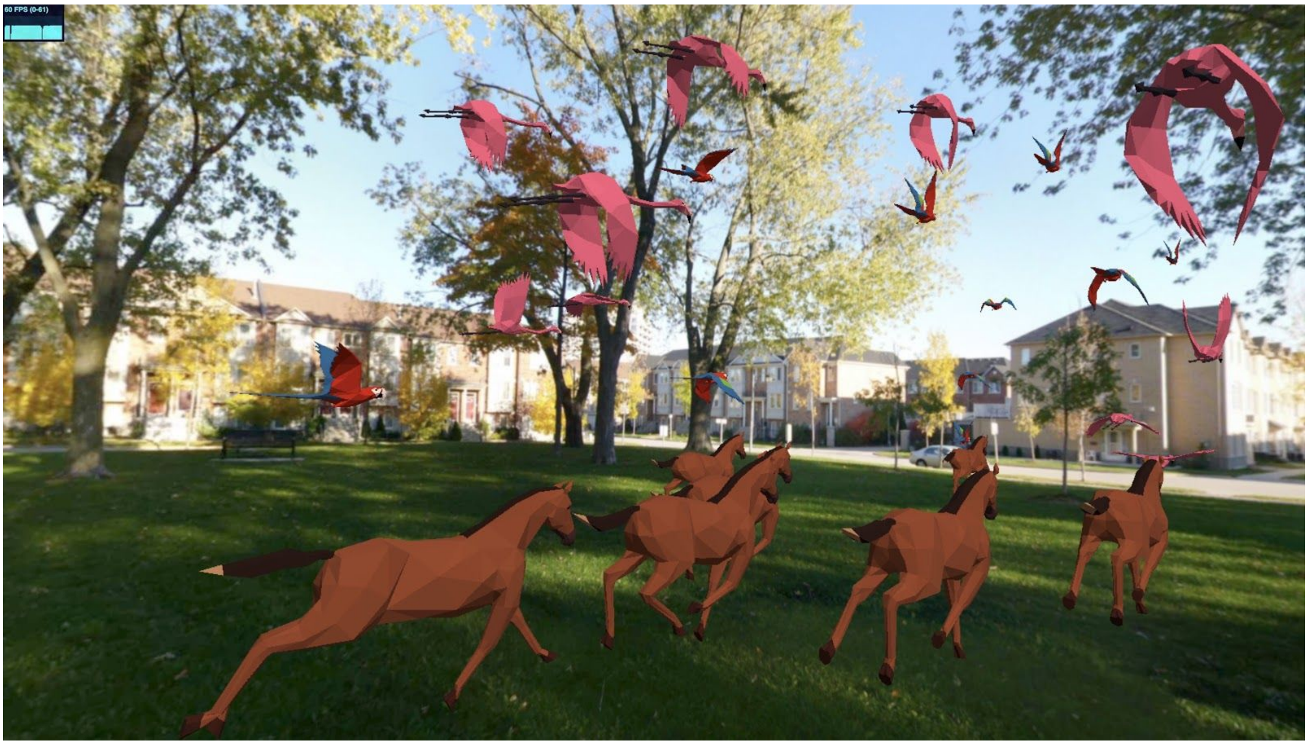
Introduction





The animation consists of running horses, flying parrots and flamingos. A cube texture is used to create the open environment and for GLTF objects are used for animals.

Technologies / Tools used

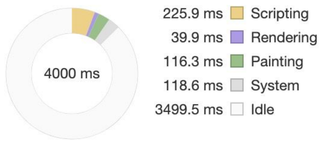
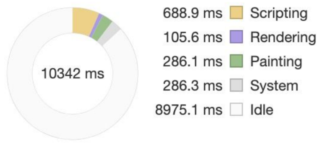
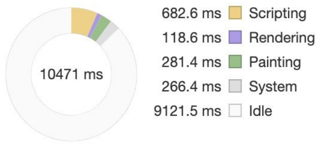
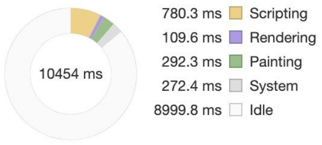
1. ThreeJS
2. WebGL
3. Stats library
4. Google Chrome Developer tools

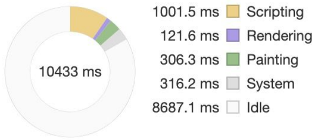
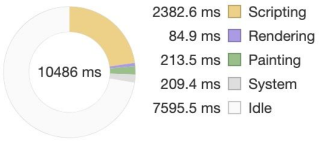
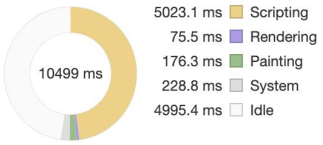
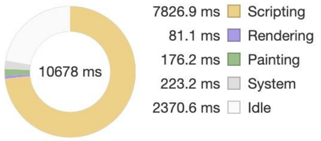
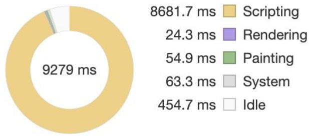
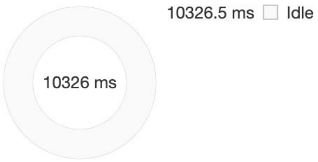
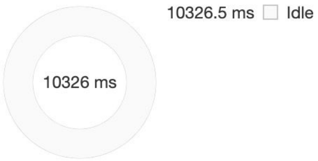
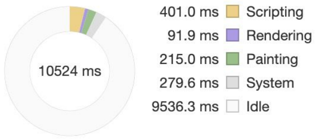
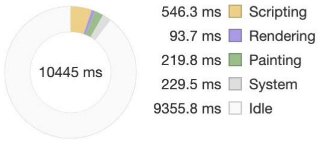
Analysis

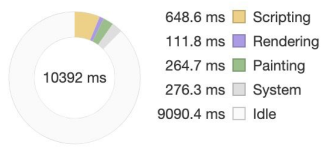
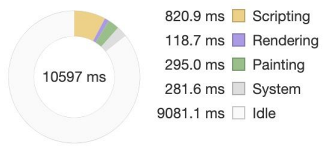
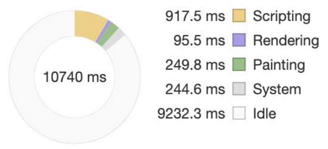
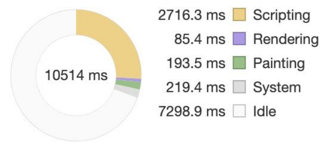
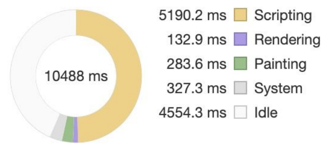
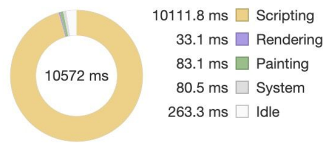
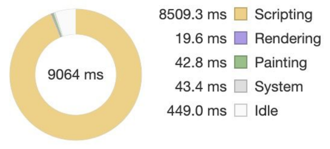
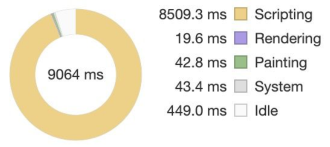
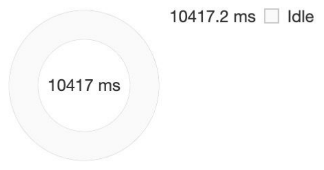
System specifications:

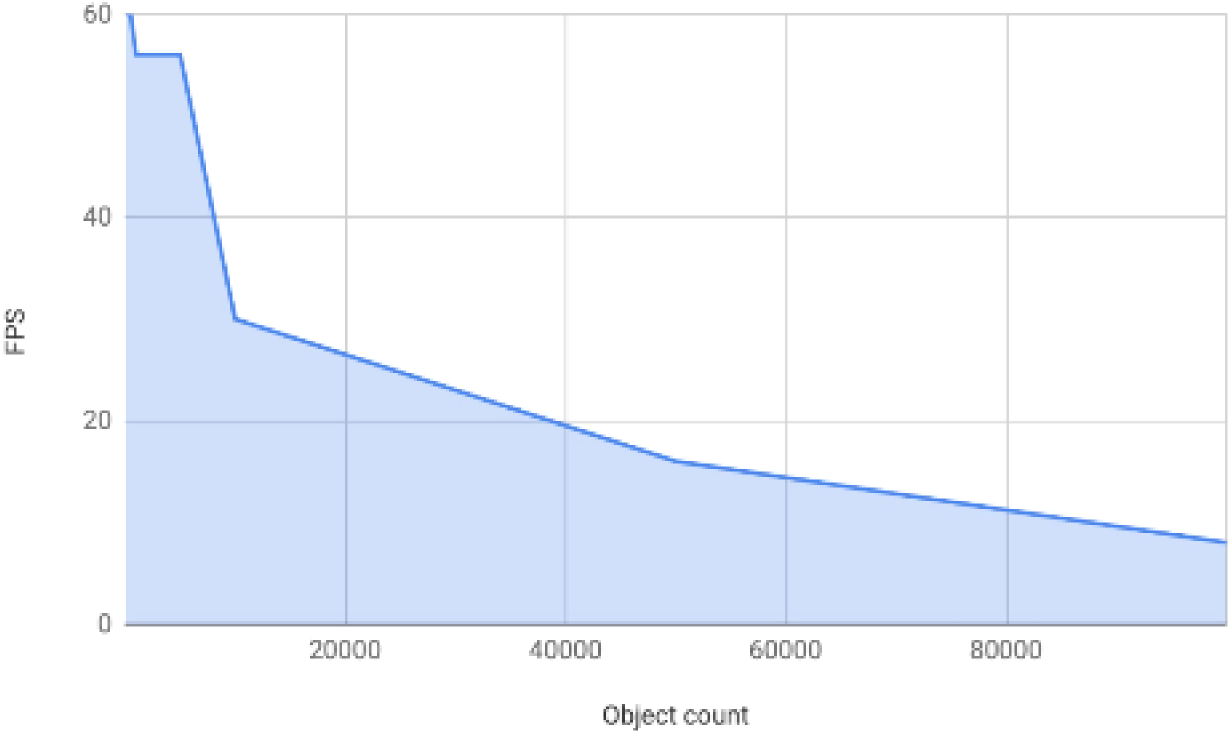
Device	MacBook Pro (13-inch, 2017, Two Thunderbolt 3 ports)
Processor	2.3 GHz Intel Core i5
Memory	8 GB 2133 MHz LPDDR3
Graphics	Intel Iris Plus Graphics 640 1536 MB

Performance

Vertices count	Polygon count	Object count	Time to render (ms)	Memory (MB)	FPS	Other
361	554	1	17	16	60	
361	554	5	17	21	60	
361	554	10	17	21	60	
361	554	50	17	21	60	

361	554	100	17	22	60	
361	554	500	17	34	60	
361	554	1000	18	41	56	
361	554	5000	18	65	56	
361	554	10000	30	162	30	
361	554	50000	60	485	16	
361	554	100000	120	860	8	
820	996	1	17	16	60	
820	996	5	17	21	60	

820	996	10	17	28	60	 10392 ms 648.6 ms 🟨 Scripting 111.8 ms 🟪 Rendering 264.7 ms 🟩 Painting 276.3 ms ⬜ System 9090.4 ms □ Idle
820	996	50	17	21	60	 10597 ms 820.9 ms 🟨 Scripting 118.7 ms 🟪 Rendering 295.0 ms 🟩 Painting 281.6 ms ⬜ System 9081.1 ms □ Idle
820	996	100	17	22	60	 10740 ms 917.5 ms 🟨 Scripting 95.5 ms 🟪 Rendering 249.8 ms 🟩 Painting 244.6 ms ⬜ System 9232.3 ms □ Idle
820	996	500	17	29	60	 10514 ms 2716.3 ms 🟨 Scripting 85.4 ms 🟪 Rendering 193.5 ms 🟩 Painting 219.4 ms ⬜ System 7298.9 ms □ Idle
820	996	1000	17	34	60	 10488 ms 5190.2 ms 🟨 Scripting 132.9 ms 🟪 Rendering 283.6 ms 🟩 Painting 327.3 ms ⬜ System 4554.3 ms □ Idle
820	996	5000	30	132	30	 10572 ms 10111.8 ms 🟨 Scripting 33.1 ms 🟪 Rendering 83.1 ms 🟩 Painting 80.5 ms ⬜ System 263.3 ms □ Idle
820	996	10000	40	160	15	 9064 ms 8509.3 ms 🟨 Scripting 19.6 ms 🟪 Rendering 42.8 ms 🟩 Painting 43.4 ms ⬜ System 449.0 ms □ Idle
820	996	50000	250	530	5	 9064 ms 8509.3 ms 🟨 Scripting 19.6 ms 🟪 Rendering 42.8 ms 🟩 Painting 43.4 ms ⬜ System 449.0 ms □ Idle
820	996	100000	500	886	2	 10417 ms 10417.2 ms □ Idle



Optimization Techniques

- Reducing the number of polygons will increase the performance
- Try to reduce the number of objects display to increase the performance
- When rendering select some portion of objects and render others in next round. It will reduce the rendering objects and it will increase the performance
- Not rendering in every round and render in specific time periods.