glTF 2.0 PBR Renderer using WebGPU

Why?

- We want to explore a new API - WebGPU
- Existing glTF renderers using WebGPU backends are not feature-complete
- Implementing a pbr renderer gives us the opportunity to interact with different aspects of the API, from model loading all the way to rendering and post-processing effects
- Plus it looks cool, and web-based!

Goals and Outcomes

- A web-based, easy-to-use PBR renderer
- Supports glTF 2.0 format, along with animation, skinning, morphing and various other extensions.

Tentative Project Timeline

- Milestone 1: Study WebGPU API, implementation of basic code framework
- Milestone 2: Full PBR material support, animation, morphing
- Milestone 3: mesh quantization, draco mesh compression, texture with basis universal supercompression

Third Party Code References

- https://github.com/KhronosGroup/glTF
- https://github.com/shrekshao/minimal-gltf-loader
- https://www.willusher.io/graphics/2020/06/15/0-to-gltf-triangle