

## **GAS-Engine: A simple game engine**

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Motivation: To understand the underlying architecture of a modern game engine, and the process by which such software makes it from the drawing board to a finished product.

Relevant Technologies: We will be using Java as the primary language, Lightweight Java Game Library (LWJGL) for input, audio and graphics, and JOML to assist in linear algebra operations. OpenGL will be used for graphics and OpenAL for sound.

### Goals:

- Component-based entity model
- Rigid body dynamics
- Audio functionality
- Renderer featuring:
  - Deferred shading
  - Shadows
  - Render to texture
  - Specular lighting
  - Whatever else we get to
- Demo scene(s) showcasing engine features