

glTF-Tutorials

glTF Tutorial

By Marco Hutter, [@javagl](#)

This tutorial gives an introduction to [glTF](#), the GL transmission format. It summarizes the most important features and application cases of glTF, and describes the structure of the files that are related to glTF. It explains how glTF assets may be read, processed, and used to display 3D graphics efficiently.

Some basic knowledge about [JSON](#), the JavaScript Object Notation, is assumed. Additionally, a basic understanding of common graphics APIs, like OpenGL or WebGL, is required. This tutorial focuses on [glTF version 2.0](#), where support for *Physically Based Rendering* was introduced, but the other concepts that are explained here are similar to how they had been implemented in [glTF version 1.0](#).

- [Introduction](#)
- [Basic glTF Structure](#)
- [Example: A Minimal glTF File](#)
- [Scenes and Nodes](#)
- [Buffers, BufferViews, and Accessors](#)
- [Example: A Simple Animation](#)
- [Animations](#)
- [Example: Simple Meshes](#)
- [Meshes](#)
- [Materials](#)
- [Example: A Simple Material](#)
- [Textures, Images, and Samplers](#)
- [Example: A Simple Texture](#)
- [Example: An Advanced Material](#)
- [Example: Simple Cameras](#)
- [Cameras](#)
- [Example: A Simple Morph Target](#)
- [Morph Targets](#)
- [Example: Simple Skin](#)
- [Skins](#)

Acknowledgements:

- Patrick Cozzi, Cesium, [@pjcozzi](#)
- Alexey Knyazev, [@lexaknyazev](#)
- Sarah Chow, [@slchow](#)

This site is open source. [Improve this page.](#)