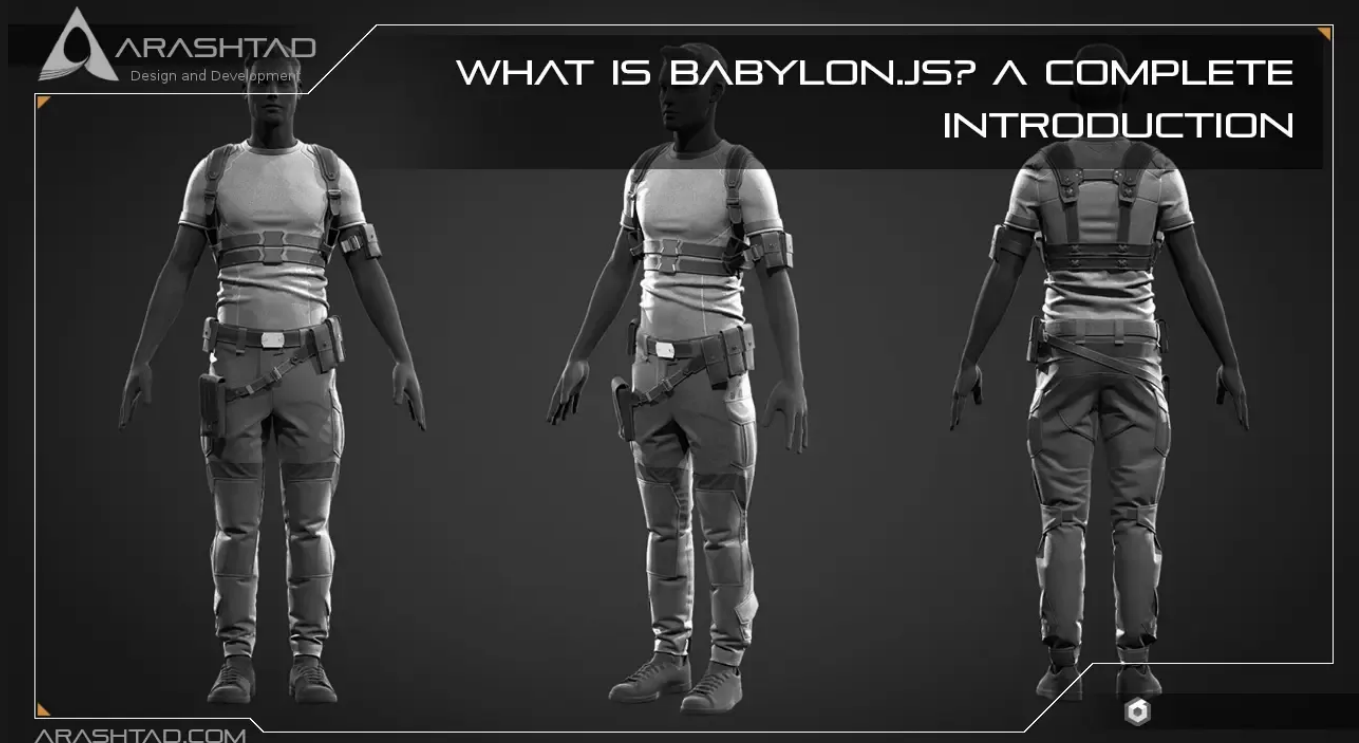


What Is Babylon.js? A Complete Introduction

No comments



Babylon.js is a 3D web development framework like Three.js that solves many of the complexities that 3D developers face when they want to design a scene. It comes with numerous wonderful features that make the creation of 3D scenes and effects much simpler. Compared to Three.js, this framework has a smaller community and less amount of documentation as it is newer but nobody can take its wonderful features for granted. The purpose of this article is to introduce Babylon.js, its features, and its functionalities.

Babylon.js Introduction

The BabylonJS framework is an open-source Javascript framework that provides APIs for developing 3D games in HTML5 and WebGL. This framework is hosted on GitHub and its official website is babylonjs.com. WebGL increases complexity with the amount of coding involved. That is when BabylonJS comes into play with the easy solution that helps mitigate this increased complexity. Babylon.js' source code is written in typescript and compiled into Javascript. In this framework, 3D objects can be created easily using the API for lights, cameras, and the engine.

The first step in working with BabylonJS is to download the file and host it on your server. In 2016, Microsoft employees developed BabylonJS. David Catuhe, Principal Program Manager at the Window & Devices Group at Microsoft, is the main person responsible for making it a success. BabylonJS requires a modern browser with WebGL support. The latest browsers, like Internet Explorer 11+, Firefox 4+, Google Chrome 9+, Opera 15+, etc., can run the demos with WebGL support.

Budzburn: 3D Store Created by Arashtad Babylon.js Developers

3D websites, 3D games, metaverses, and other types of WebGL and 3D applications are what we develop in our 3D web development team. Arashtad has skilled 3D web developers who can handle any kind of task in the case of WebGL and other types of 3D applications.

If you have an idea for building a high-tech, standard, secure, and nice-looking 3D application and need an expert team to perform it, feel free to have a glance at our past and running projects on our portfolio and don't hesitate to drop us a message to initiate the discussion about your project with us. We have clients from around the world who are consistently coming back to us for different parts of their projects knowing that we always do our best to lift up their business and ideas with a clean and advanced performance. In the following image, you can see [Budzburn](#), a 3D store created by BabylonJS developers of Arashtad company.

babylon demo type unknown

Babylon.js Latest Cutting Edge Features

Several features in BabylonJS make it easier to create 3D scenes of different types.

Cross-Platform Native Development

To reach the widest audience with the least amount of effort, BabylonJS 5.0 lets you use the BabylonJS API to develop web AND native applications. BabylonJS 5.0 allows you to write your rendering code once, then deploy it across any platform, whether it is the web, Windows, Mac, iPhone, or Android Phone.

Animation Curve Editor

In the past, creating and manipulating animation data in a rendering engine has been a complicated and verbose process. Not anymore! With Babylon.js 5.0, you can easily create and modify animation data directly in your Babylon scene with the built-in Animation Curve Editor (ACE). Additionally, as with all BabylonJS Platform tools, animation data can be saved on the BabylonJS Snippet Server and loaded back into the BabylonJS scene using just one line of code!

Performance Profiler

You should keep performance at the forefront of your mind when creating complex interactive 3D experiences. With the introduction of the new Performance Profiler in BabylonJS 5, you can easily debug and manage performance. With this handy tool, you can view a live graph of key performance indicators for your scene in real-time! That's it! Make a change, and see how it affects performance!

[What Is Babylon.js? A Complete Introduction](#)

Unlimited Morph Targets

Whatever you call them, Blend Shapes, Shape Keys, or Morph Targets, BabylonJS 5.0 adds rocket fuel to your ability to use influenced vertex positions. You can now create unlimited amounts of Morph Targets with this new feature. You want an animated face that has thousands of Morph Targets so you can get that perfect expression. It's all free now, and you can do it all online.

GUI Editor Beta

With BabylonJS 5.0, Babylon.js' powerful GUI system becomes far easier to use with the introduction of the GUI Editor Beta. This powerful system includes countless widgets, controls, and properties that make it easy to create rich GUIs. With its simple and intuitive drag-and-drop interface, the GUI Editor Beta is a rich and modern tool, while still in active development. Say goodbye to thousands of lines of GUI code and hello to a world of design with the GUI Editor Beta and load your creations with a single line of code.

Order Independent Transparency

Babylon.js aims to make it as easy as possible for you to provide information about rendering order, alpha index, depth prepasses, and many other details, so your scene looks correct. Now that you have BabylonJS 5.0, you can make transparency simple by defining one line of code: `scene.useOrderIndependentTransparency = true`.

WebXR Advancements

With WebXR, web developers can build amazing cross-browser XR experiences or add mobile AR components to their websites. Although BabylonJS has been rendering world-locked 3D objects for some time, with the introduction of Light Estimation, it steps up the beauty factor. A powerful but easy-to-use feature that estimates the light in your real-world location and automatically matches your virtual object's lighting and shadows according to the real-world light. BabylonJS 5.0 also supports WebXR image tracking.

New Node Material Nodes

Among the most advanced tools in the Babylon Platform, the Node Material Editor is one of the most comprehensive. With Babylon.js 5.0, you can create stunning GLSL shaders with ease. With several new logical and procedural noise nodes, the Node Material becomes even better.

GLTF Updates

BabylonJS prioritizes supporting the latest and greatest advancements in the glTF format. This means every new release unlocks new and beautiful rendering capabilities, and BabylonJS 5.0 raises the bar. Now you can render some absolutely amazing visuals with full support for `KHR_materials_volume`, `KHR_materials_transmission`, and `KHR_materials_ior`.

Mixed Reality Toolkit for Babylon.js

In addition to adding support for the Mixed Reality Toolkit, BabylonJS 5.0 includes updated support for the world's most advanced 3D interface component library. With this advanced library, you can easily add holographic slates, 3D sliders, touch holographic buttons, touch mesh buttons, and many others to your BabylonJS scenes.

Asset Librarian

There are a large number of free Creative Commons 0 assets available on the Babylon.js Platform for use in your BabylonJS scenes. With BabylonJS 5.0, it's easier and faster than ever to access these assets. You can access 200+ free assets by using the new Assets namespace in your BabylonJS scenes with the new Asset Librarian.

Material Plugin Manager

Creating real-time shaders requires power, performance, and flexibility. BabylonJS 5 makes this even more possible with its Material Plugin Manager, which enables you to add custom code to a Babylon.js shader. A Material Plugin Manager allows developers to fully customize the power, performance, and appearance of any advanced shader, including PBR, to take it to the next level.

DEV Stories Documentation

In Babylon.js 5, there are new tutorials called Dev Stories. They provide step-by-step tutorials on a wide variety of subjects that many BabylonJS developers ask about. From setting up a BabylonJS project quickly to adding interactive. Our Dev Stories are rich, detailed tutorials that will help you create your e-commerce website quickly, add interactive 3D

elements, and deploy your BabylonJS project to a Native Application.

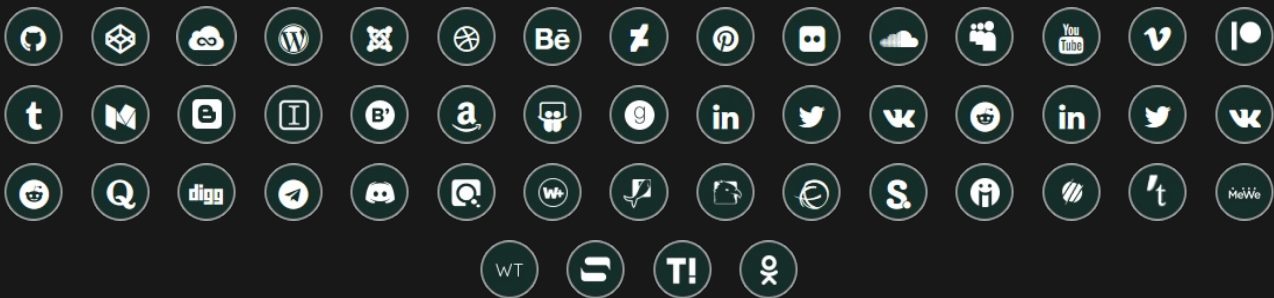
Conclusion

With Babylon.js 5.0, you're looking at the biggest, boldest, and most ambitious update to the platform ever. A new generation of web rendering technology is here with BabylonJS 5.0, which includes the full support of WebGPU, Native Capabilities, and more tools, features, and improvements than you can imagine.

Join Arashtad Community

Follow Arashtad on Social Media

We provide variety of content, products, services, tools, tutorials, etc. Each social profile according to its features and purpose can cover only one or few parts of our updates. We can not upload our videos on SoundCloud or provide our eBooks on Youtube. So, for not missing any high quality original content that we provide on various social networks, make sure you follow us on as many social networks as you're active in. You can find out Arashtad's profiles on different social media services.



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