

# Augmented Reality Applications

## A Few Important Things to Remember!

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### Version control systems

Are a category of software tools that help a software team manage changes to source code over time. Version control software keeps track of every modification to the code in a special kind of database.

#### Git (<https://git-scm.com/>)

The most widely used modern version control system in the world today is Git. Git is a mature, actively maintained open source project originally developed in 2005 by Linus Torvalds, the famous creator of the Linux operating system kernel

#### GitHub (<https://github.com/>)

A Git repository hosting service, but it adds many of its own features. While Git is a command line tool, GitHub provides a Web-based graphical interface. It also provides access control and several collaboration features, such as a wikis and basic task management tools for every project.

#### GitHub Pages (<https://pages.github.com/>)

A static site hosting service designed to host your personal, organization, or project pages directly from a GitHub repository.

#### GitHub Desktop (<https://desktop.github.com/>)

GitHub Desktop is a fast and easy way to contribute to projects from Windows and OS X, whether you are seasoned user or new user, GitHub Desktop is designed to simplify the all process and workflow in your GitHub.

### Hypertext Transfer Protocol Secure (HTTPS)

An extension of the Hypertext Transfer Protocol (HTTP). It is used for secure communication over a computer network, and is widely used on the Internet. In HTTPS, the communication protocol is encrypted using Transport Layer Security (TLS), or, formerly, its predecessor, Secure Sockets Layer (SSL). The protocol is therefore also often referred to as HTTP over TLS, or HTTP over SSL.

### HTML

Hypertext Markup Language, a standardized system for tagging text files to achieve font, color, graphic, and hyperlink effects on World Wide Web pages.

## JavaScript

JavaScript is a Programming Language for the Web and other applications, it can update and change both HTML and CSS. I can also can calculate, manipulate and validate data.

## A-FRAME (<https://aframe.io/>)

A web framework for building virtual reality experiences. Users can Make WebVR with HTML and Entity-Components. It works on Vive, Rift, Daydream, GearVR, desktop

## AR.js (<https://medium.com/arjs>)

AR.js is an efficient Augmented Reality solution on the Web. It runs 100% in your web browser, this means no app to install! There is no need for a specific device either e.g. Tango or iPhone. It runs on all mobile platforms: Android, iOS11 and Windows mobile. You can use it with your own phone.

## QR code

Abbreviated from Quick Response Code, is the trademark for a type of matrix barcode (or two-dimensional barcode) it was first designed in 1994 for the automotive industry in Japan. A barcode is a machine-readable optical label that contains information about the item to which it is attached.

## AR Markers

Augmented reality markers or short AR-markers are visual cues which trigger the display of the virtual information. Markers are normal images or small objects which are trained beforehand so that they can be recognized later in the camera stream. After a marker is recognized, its position, scale, and rotation are derived from visual cues and transferred to the virtual information.

## Week 01 Topics (Web AR)

- Create GitHub Account
- Install GitHub Desktop on your computer
- Create a new GitHub Repository
- Clone your repository to your local drive
- Create default index.html page, **commit** it to GitHub and test it on your browser.
- Create your Assets Folder
- Add the provided 3D objects
- Create your "HelloWorld" Project Folder
- **Commit** it to GitHub and test it on your browser.

