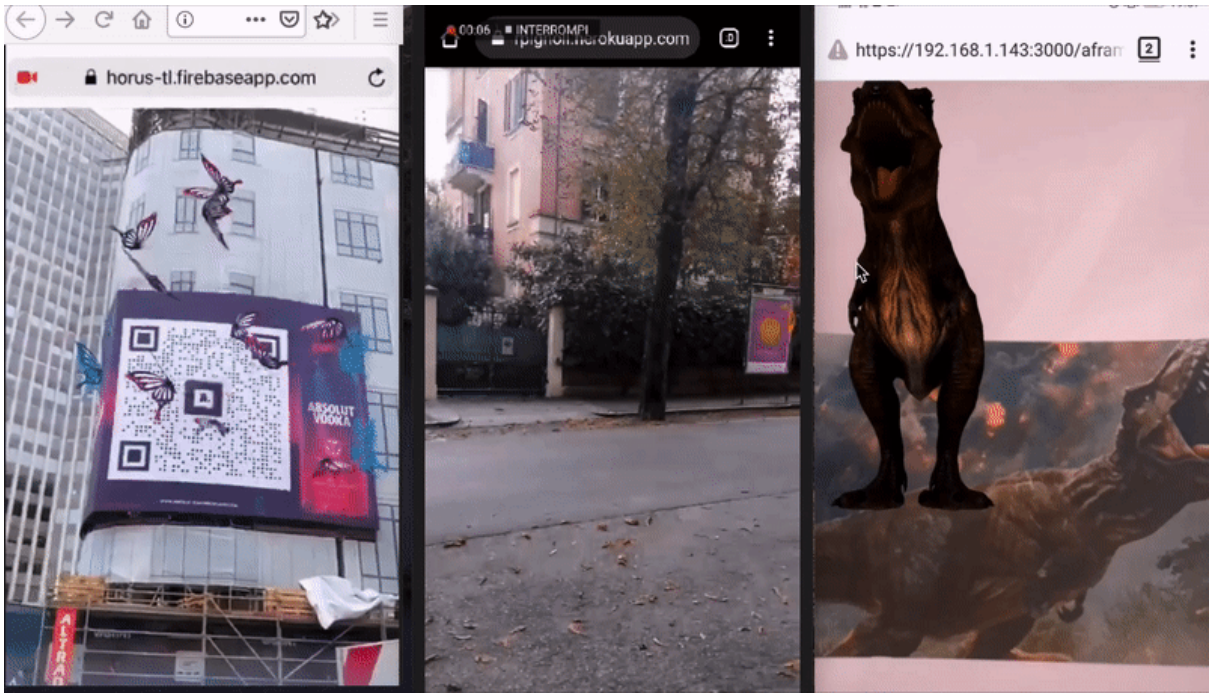
AR.js



What is AR.js?

AR.js is a lightweight library for Augmented Reality on the Web, coming with features like Image Tracking, Location based AR and Marker tracking.

AR.js features the following types of Augmented Reality, on the Web:

- **Image Tracking**, when a 2D image is found by the camera, it's possible to show some kind of content on top of it, or near it. The content can be a 2D image, a GIF, a 3D model (also animated) and a 2D video too. Cases of use: Augmented Art, learning (Augmented books), Augmented flyers, advertising, etc.
- **Location Based AR**, this kind of AR uses real-world places in order to show Augmented Reality content, on the user device. The experiences that can be built with this library are those that use the user's position in the real world. The user can move (ideally outdoor) and through their smartphones they can see AR content where places are in the real world. Moving around and rotating the phone will make the AR content change according to users position and rotation (so places are 'sticked' in their real position, and appear bigger/thinner according to their distance from the user). With this solution it’s possible to build experiences like interactive support for touristic guides, support when exploring a new city, find places of interest like buildings, museums, restaurants, hotels and so on. It’s also possible to build learning experiences like treasure hunts and biology or history learning games, or use this technology for situated art (visual art experiences bound to specific real world coordinates).

- **Marker Tracking**, When a marker is found by the camera, it's possible to show some content (same as Image Tracking). Markers are very stable but limited in shape, color and size. It is suggested for those experiences where are required a lot of different markers with different content. Examples of use: (Augmented books), Augmented flyers, advertising.

What is it good for?

To create web-based augmented reality experiences.

How important is it?

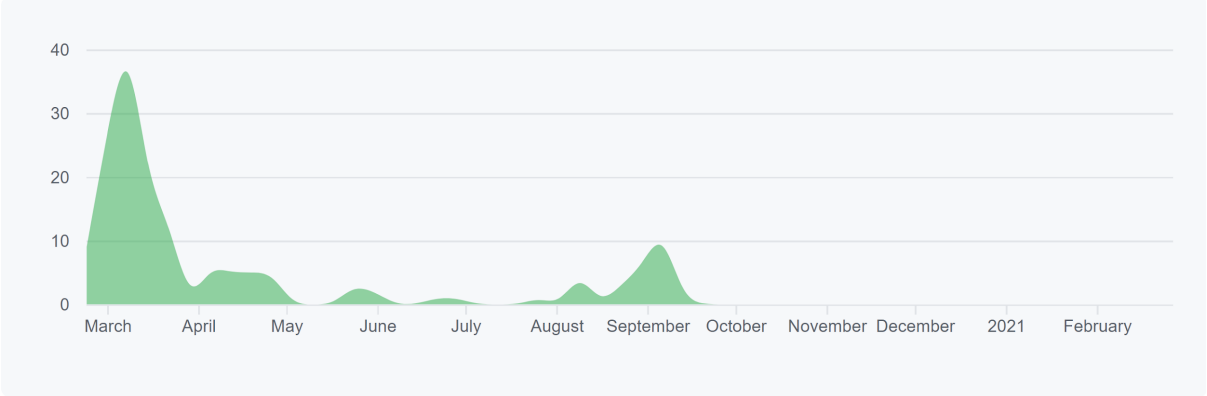
Augmented Reality is the technology that makes it possible to add overlayed content on the real world. It can be provided for several types of devices: handheld (like mobile phones), headsets, desktop displays, and so on. This technology has a wide range of applications, from gaming and entertainment to medicine, education and business.

Even though there are other web based augmented reality libraries in the market but most of these require commercial licenses - AR.js is probably the most relevant augmented reality initiated that is free and open source.

AR.js repository has over 15k stars in its initial Github repository. This repository was recently moved to an organization repository (AR-js-org organization), which already has over 2k stars.

How alive is the project?

Even though the project has over 15k stars on Github, the number contributors over the past year is only 7. The last commit was in September 2020.



What are the technologies involved?

AR.js is coded primarily on javascript and HTML.

AR.js relies significantly on 3 other libraries: three.js, A-Frame, and jsartoolkit5, and requires a browser that supports webgl and webrtc.

Is the project in a development phase or maintenance/evolution phase?

The project is already being applied in real-world applications. We consider the project to be in the evolution phase, even though there are still multiple improvements that need to be made.

Are there many issues to fix?

There are 106 open issues. Our team has also identified some additional improvement areas that are not yet reported on the repository.