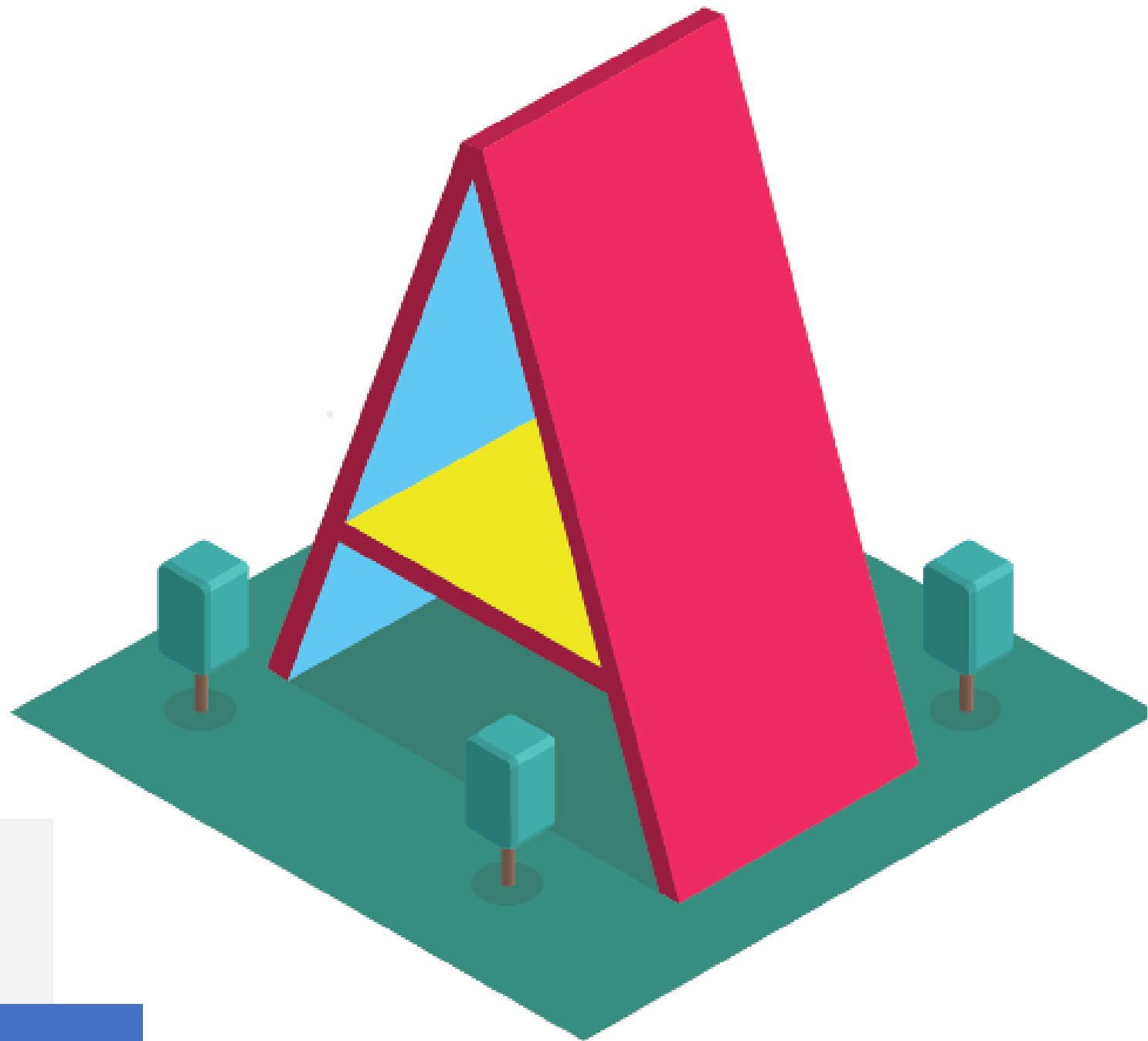
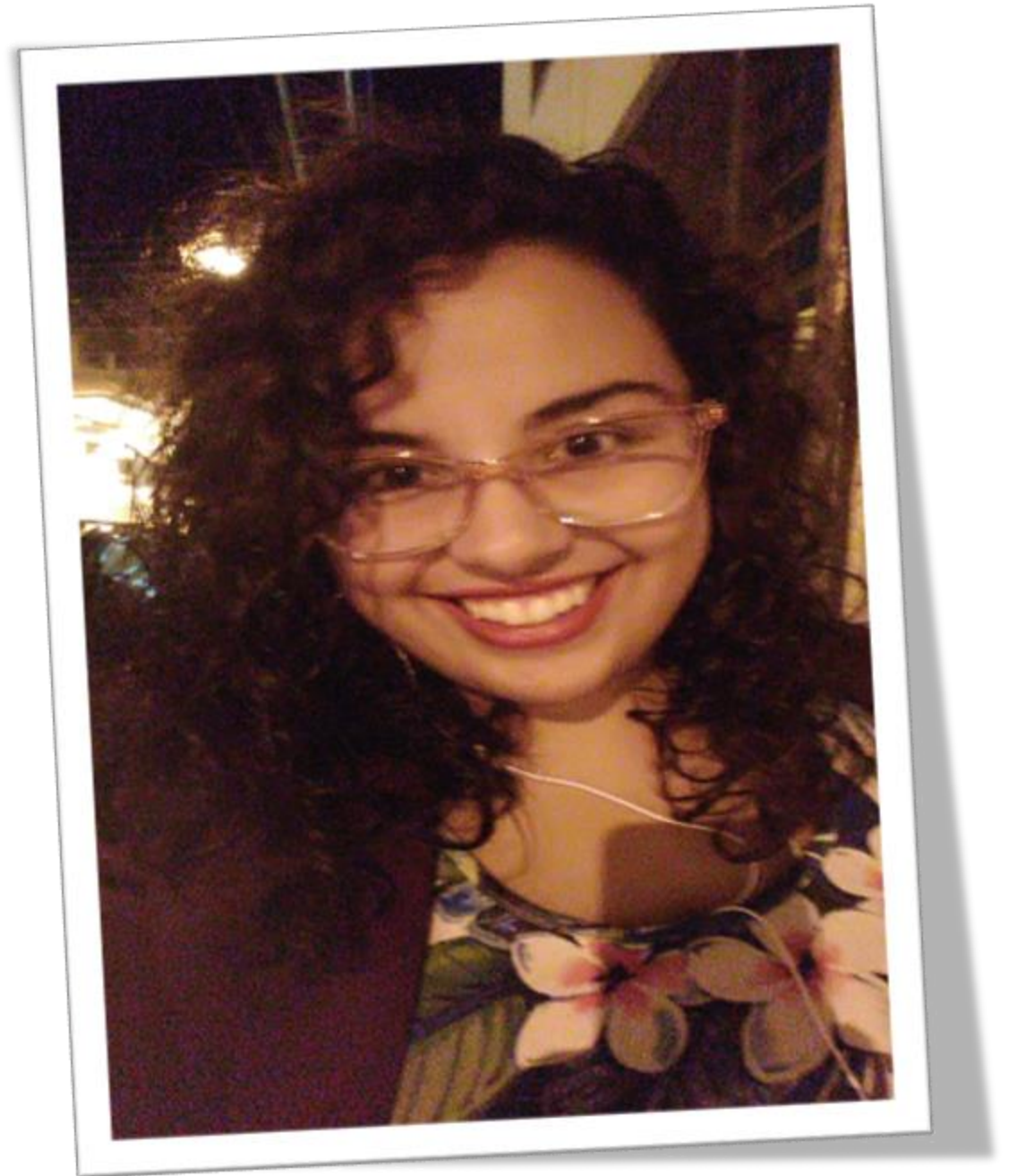


Realidade Virtual na Web com A-Frame.js



Quem sou eu?

Eu sou uma nerd e autodidata, apaixonada por tecnologia, cinema, livros, ciência. Estuda Engenharia de Computação no Inatel, e possuo experiência como técnica em informática.

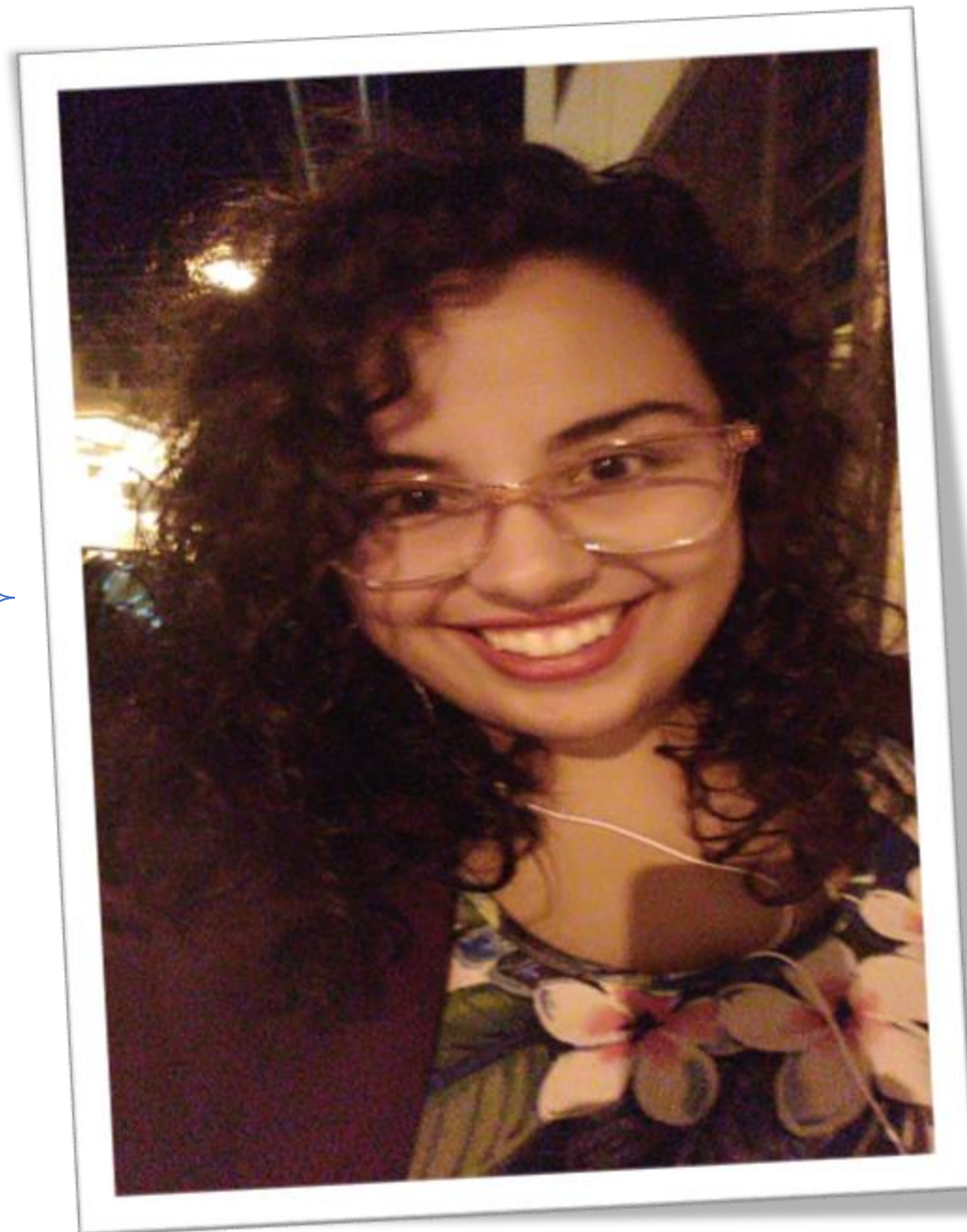


Contato

Dany.nt.14@gmail.com

<https://github.com/danynt14>

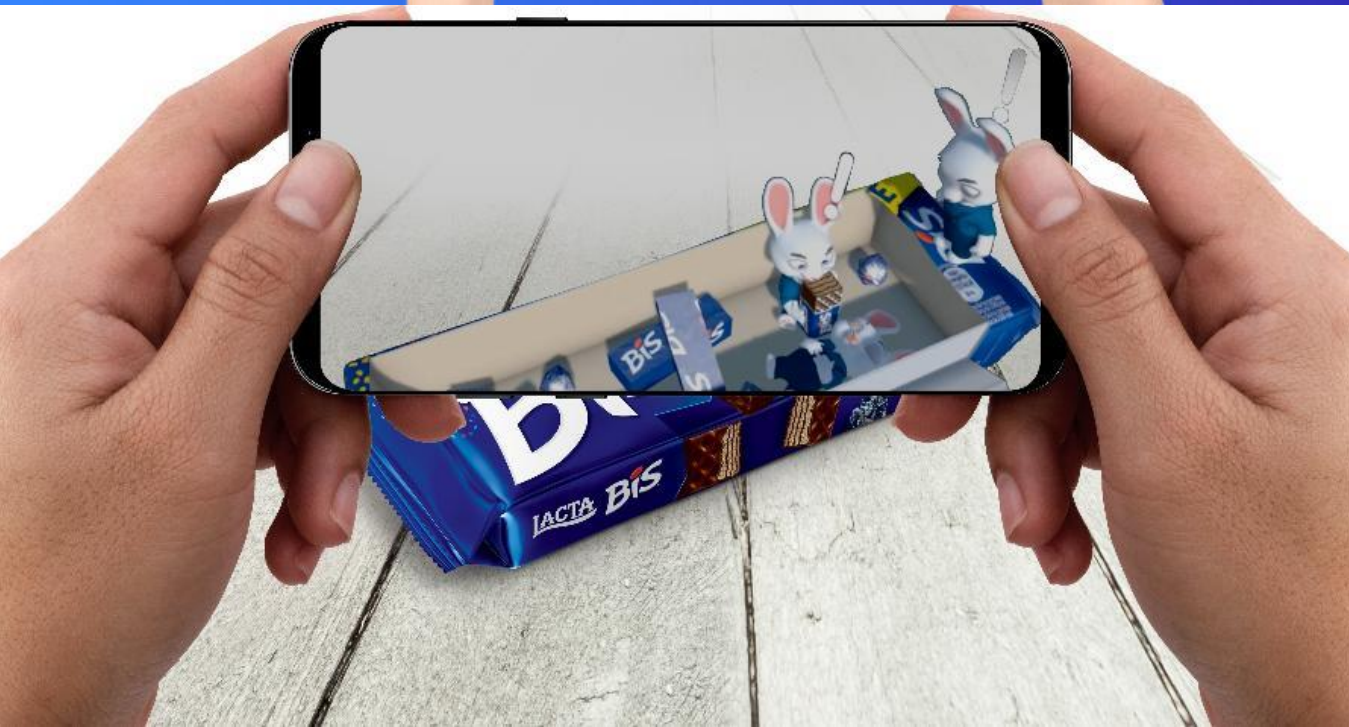
<https://www.linkedin.com/in/danielenazare/>

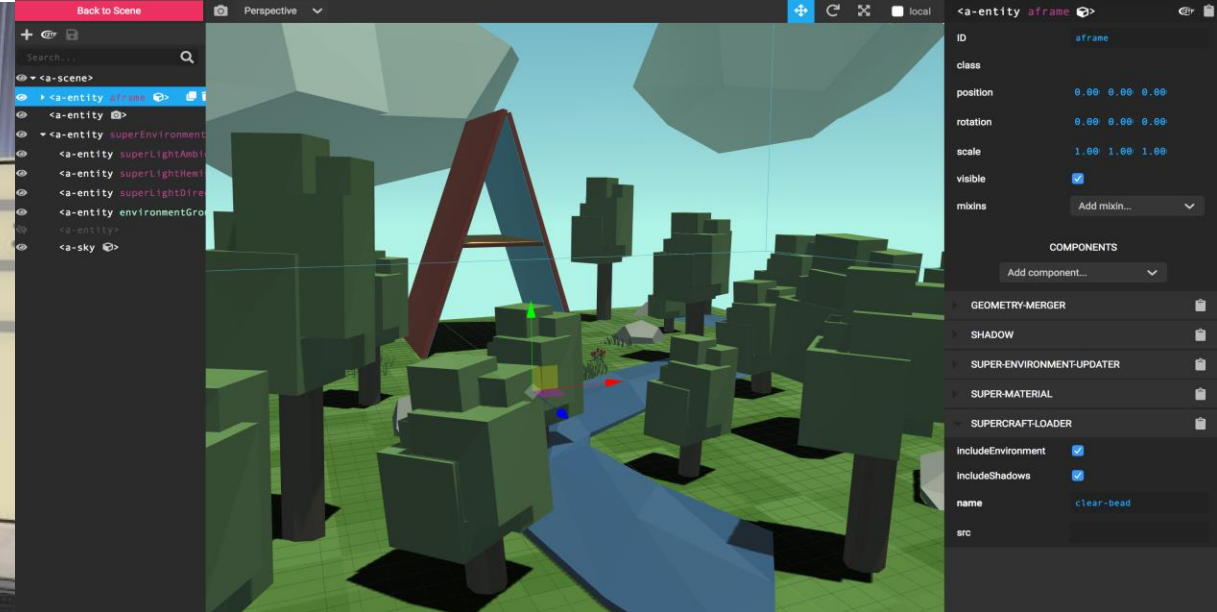


Intro

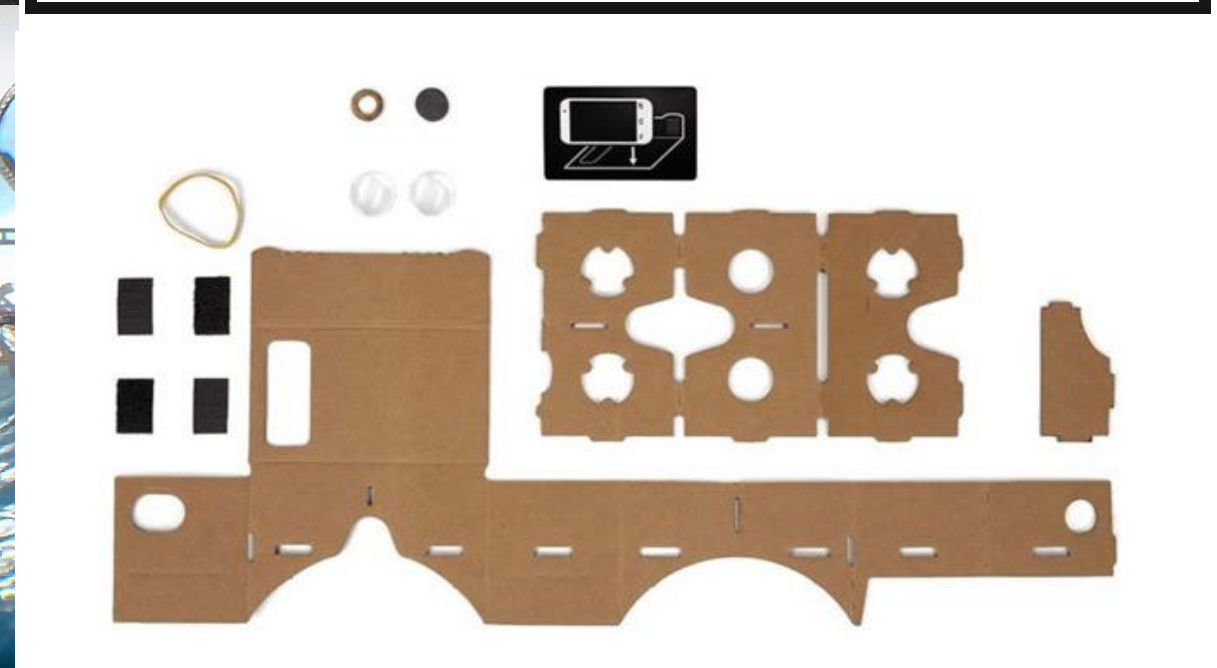
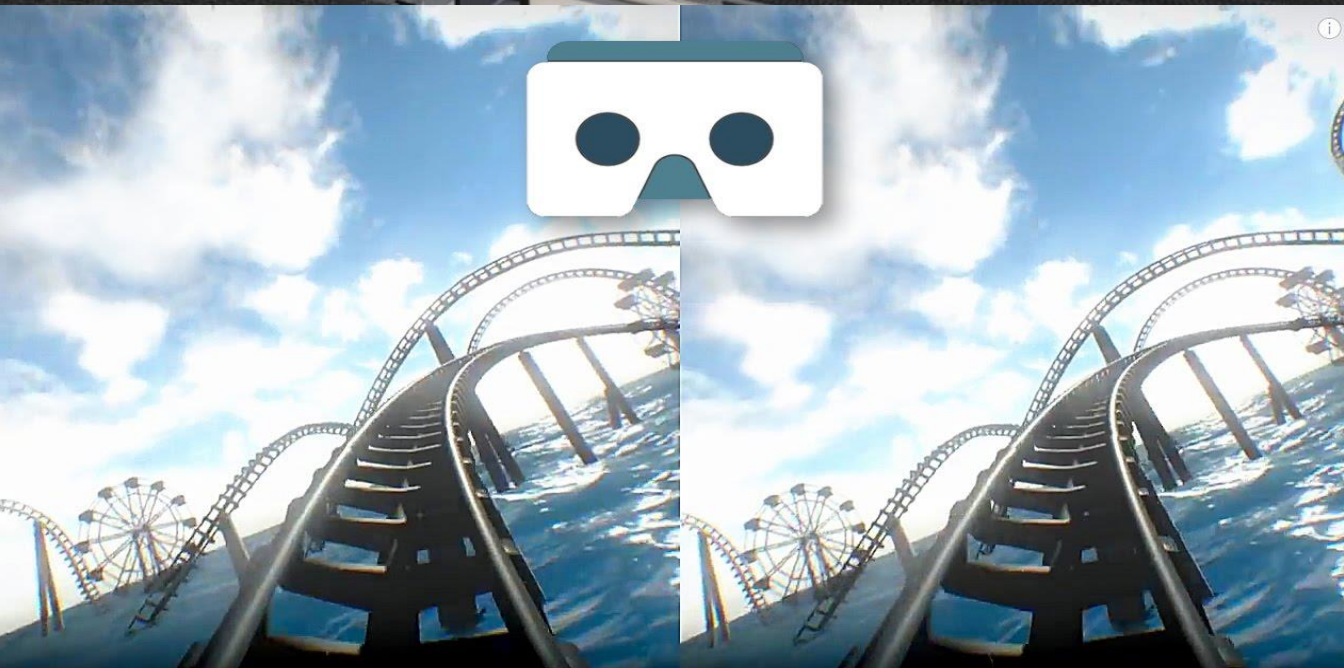


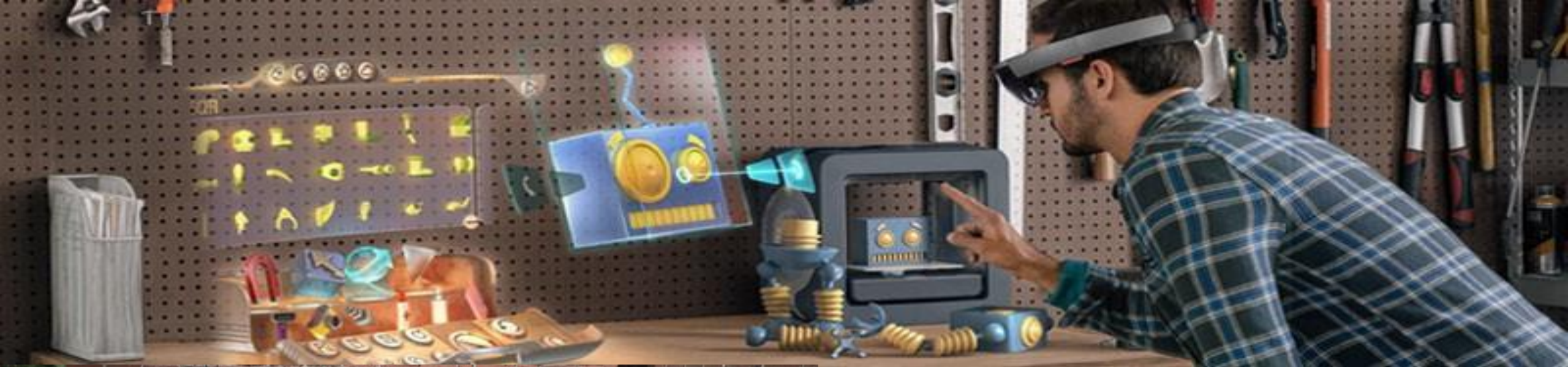
Realidade Aumentada





Realidade Virtual





Realidade Mista



WebVR

WebVR is an open specification that makes it possible to experience VR in your browser. The goal is to make it easier for everyone to get into VR experiences, no matter what device you have([WebVR](#))

WebXR

WebXR is a group of standards which are used together to support rendering 3D scenes to hardware designed for presenting virtual worlds (**virtual reality**, or **VR**), or for adding graphical imagery to the real world, (**augmented reality**, or **AR**). ([WebXR](#))

`<a-sky></a-sky>`

`<a-sphere></a-sphere>`

`<a-cylinder></a-cylinder>`

`<a-box></a-box>`

`<a-plane></a-plane>`

A-frame.js



História

- ❑ Projeto foi resultado de uma iniciativa da Mozilla
- ❑ Sua primeira versão foi disponibilizado em 2015



História

- ❑ Última Versão 1.0.0
- ❑ Atualmente é mantido pelo SuperMedium

The image features a collage of various 3D scenes and landscapes. In the center, there is a prominent 3D structure resembling a stylized tent or a simple house with a red roof, a yellow interior, and a blue base, set on a green platform. Surrounding this central element are numerous smaller, semi-transparent rectangular frames, each containing a different 3D scene, including landscapes, architectural models, and abstract shapes. The overall aesthetic is vibrant and digital.

A-Frame.js

- ❑ Framework Open – Source com Licença MIT
- ❑ Acessível e simples



A-Frame.js

- ❑ Usa o WebVR API para obter dados dos sensores da plataforma vigente
- ❑ Usa o WebGL API para renderizar elementos 3D na tela



Características

- ❑ Fornece uma Linguagem Declarativa
- ❑ Animações executam em até 90fps



Arquitetura

- ❑ **WebVR** com HTML
- ❑ Modelo Entidade-Componente
- ❑ Poderoso Framework `Tree.js`

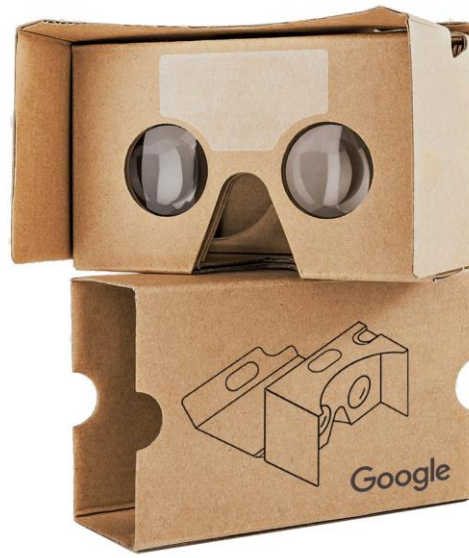


Acesso ilimitado

- ☐ Java Script
- ☐ APIs
- ☐ Tree.js
- ☐ WebVR
- ☐ WebGL



 **oculus rift s**



Daydream

htc  **VIVE**



SAMSUNG
GEAR VR



Compatibilidade



HANDS-ON

**Windows Mixed
Reality Demo**

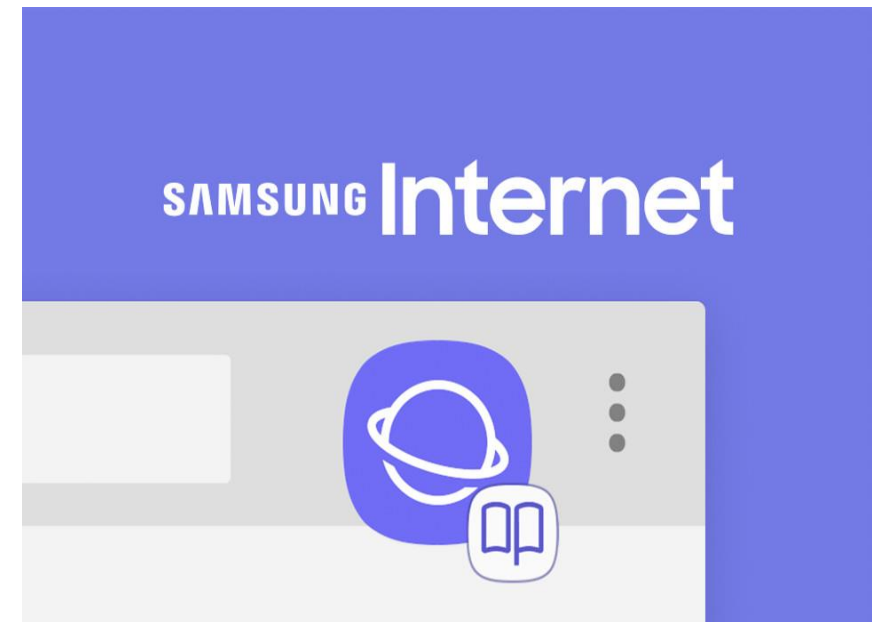

Microsoft Edge



Compatibilidade



Exokit
Native



Desenvolvimento

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>Hello, WebVR! • A-Frame</title>
    <meta name="description" content="Hello, WebVR! • A-Frame">
    <script src="https://aframe.io/releases/1.0.2/aframe.min.js"></script>
  </head>
  <body>
    <a-scene background="color: #FAFAFA">
      <a-box position="-1 0.5 -3" rotation="0 45 0" color="#4CC3D9" shadow></a-box>
      <a-sphere position="0 1.25 -5" radius="1.25" color="#EF2D5E" shadow></a-sphere>
      <a-cylinder position="1 0.75 -3" radius="0.5" height="1.5" color="#FFC65D" shadow></a-cylinder>
      <a-plane position="0 0 -4" rotation="-90 0 0" width="4" height="4" color="#7BC8A4" shadow></a-plane>
    </a-scene>
  </body>
</html>
```


afame Show Live

Click 'Show' to open the live project in another tab ml>

Glitch

Logs

back-end +

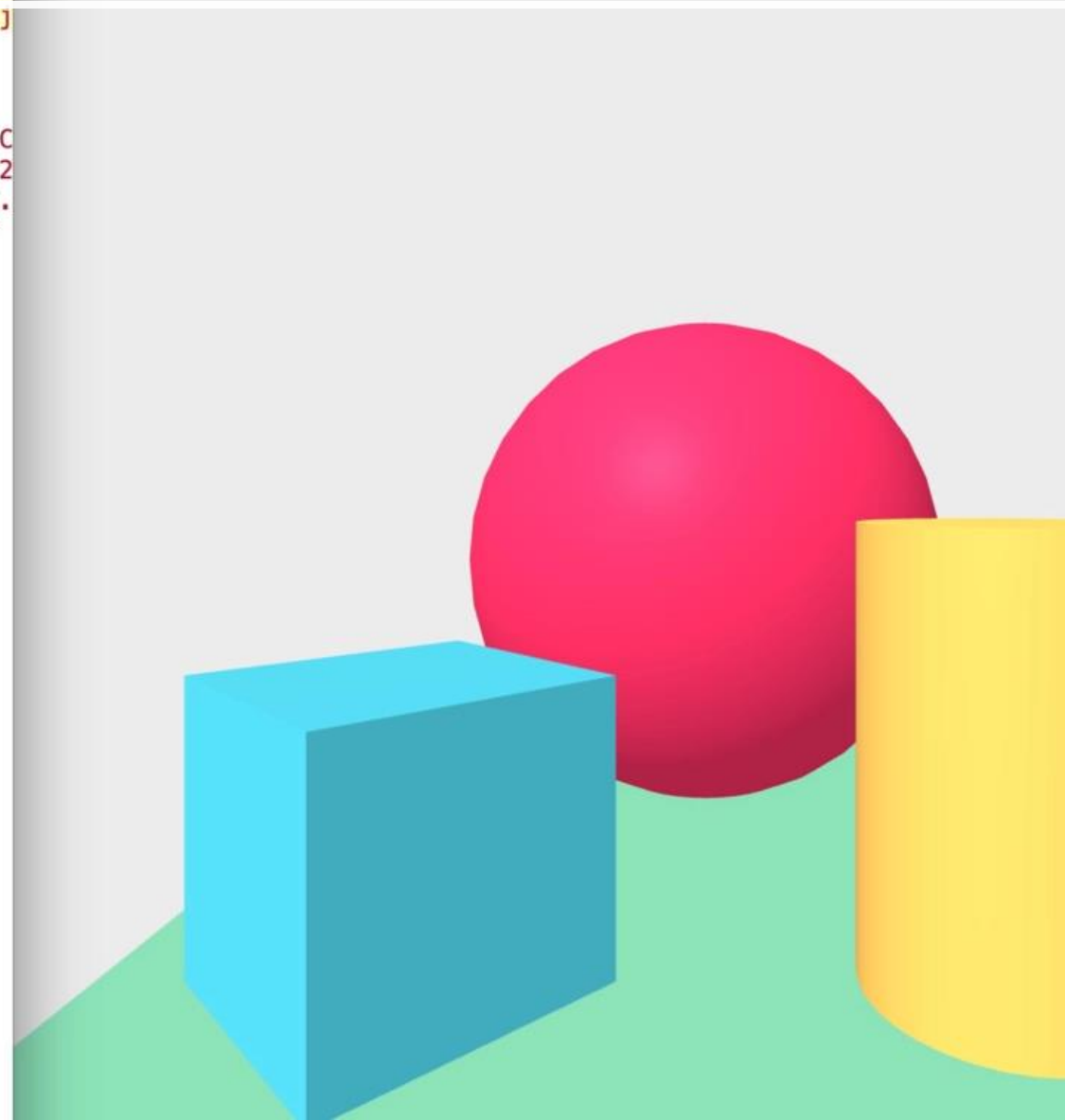
- .env
- package.json
- README.md
- server.js

front-end +

- assets
- views/index.html ▾

```
<head>
  <title>Hello, WebVR! - A-Frame</title>
  <meta name="description" content="Hello, WebVR! - A-Frame" />
  <script src="https://aframe.io/releases/0.5.0/aframe.min.js"></script>
</head>
<body>
  <a-scene>
    <a-box position="-1 0.5 -3" rotation="0 45 0" color="#4C8A8A"></a-box>
    <a-sphere position="0 1.25 -5" radius="1.25" color="#EF2D6E"></a-sphere>
    <a-cylinder position="1 0.75 -3" radius="0.5" height="1" color="#4C8A8A"></a-cylinder>
    <a-plane position="0 0 -4" rotation="-90 0 0" width="4" height="4" color="#4C8A8A"></a-plane>
    <a-sky color="#ECECEC"></a-sky>
  </a-scene>
</body>
</html>
```

<https://glitch.com/>

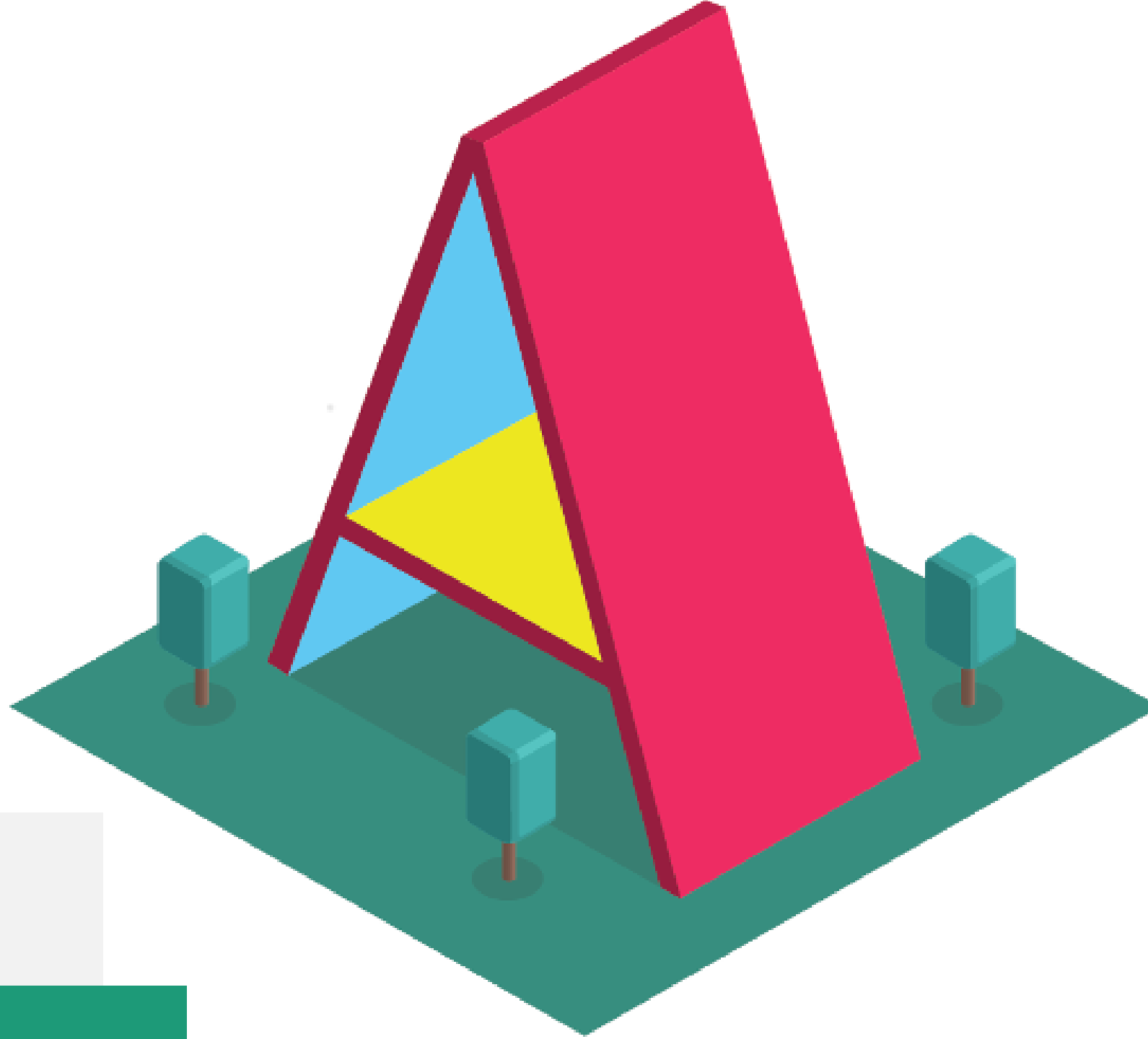




Visual Inspector

<ctrl> + <alt> + i

Realidade
Aumentada
com
A-Frame

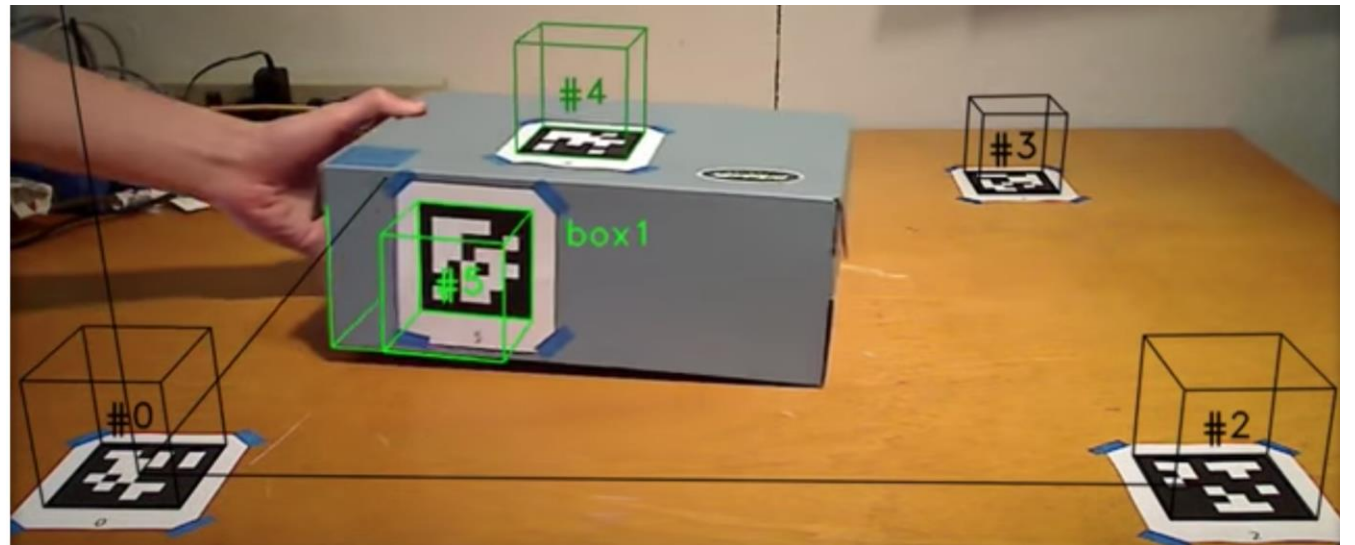


A-frame com Realidade Aumentada(AR)

A-frame



AR.JS



AR.js Marker Training

UPLOAD

DOWNLOAD

PDF ONE PER PAGE

PDF TWO PER PAGE

PDF SIX PER PAGE



[Gera um Marcador](#)

Associar o Marcador ao Objeto 3D

Dê preferência aos arquivos .gtf!





Efficient Augmented Reality

For the Web

Resultado

Obtendo o A-Frame

Node.js command prompt

Your environment has been set up for using Node.js 13.6.0 (x64) and npm.

C:\Users\Fabiele>npm install aframe

```
<script src="https://aframe.io/releases/1.0.3/aframe.min.js"></script>
```



```
<hello-world />
```

• • • • •
Não se
Esqueça de
Jakob
Nielsen!

O Papa da IHM





Supermercado VR





thank
you

Referências Bibliográficas

- **A-Frame.** Disponível em: <<https://aframe.io/docs/1.0.0/introduction/>>. Acesso em 20 de jan. de 2020.
- **A-Frame.** Disponível em: <<https://aframe.io/blog/>>. Acesso em 20 de jan. de 2020.
- **Glitch.** Disponível em: <<https://glitch.com/>>. Acesso em 20 de jan. de 2020.
- **WebVR.** Disponível em: <<https://webvr.info/>>. Acesso em 20 de jan. de 2020.
- **W3.** Disponível em: <<https://www.w3.org/TR/webxr/>>. Acesso em 20 de jan. de 2020.
- **Mozilla.** Disponível em: <<https://mixedreality.mozilla.org/>>. Acesso em 20 de jan. de 2020.