

iMuseum

Sapienza 2020 IOT course

Github repository: <https://github.com/Giulio64/IOT2020BigProject>

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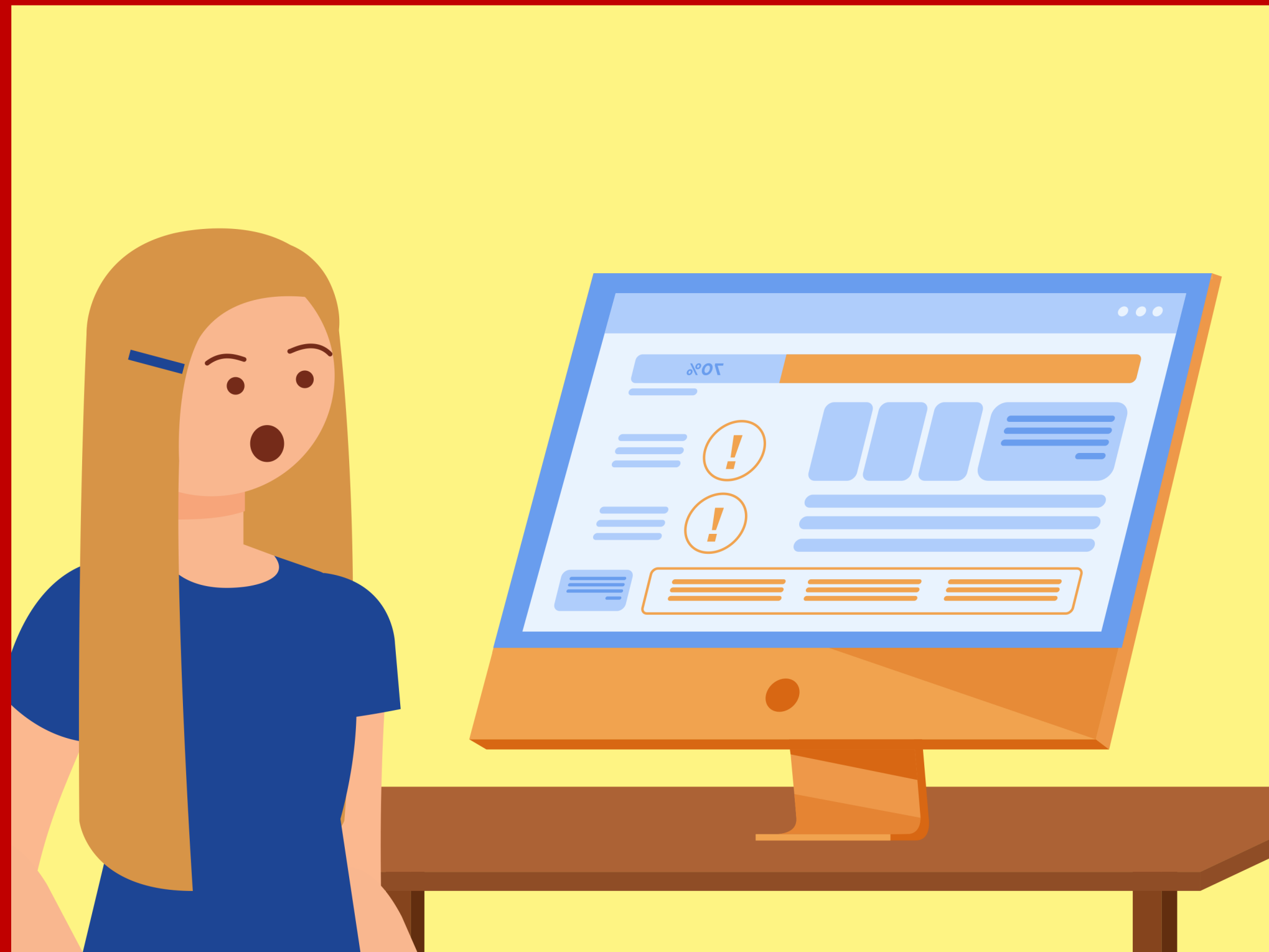
Visitor interaction

Upon approaching an artwork the app will provide to the users three "tiers" of information:

- **Quick overview:** basic information about the artwork;
- **Complete description:** a more detailed description of the artwork and the author;
- **Academic:** academic level information like articles and researches about the piece of art.

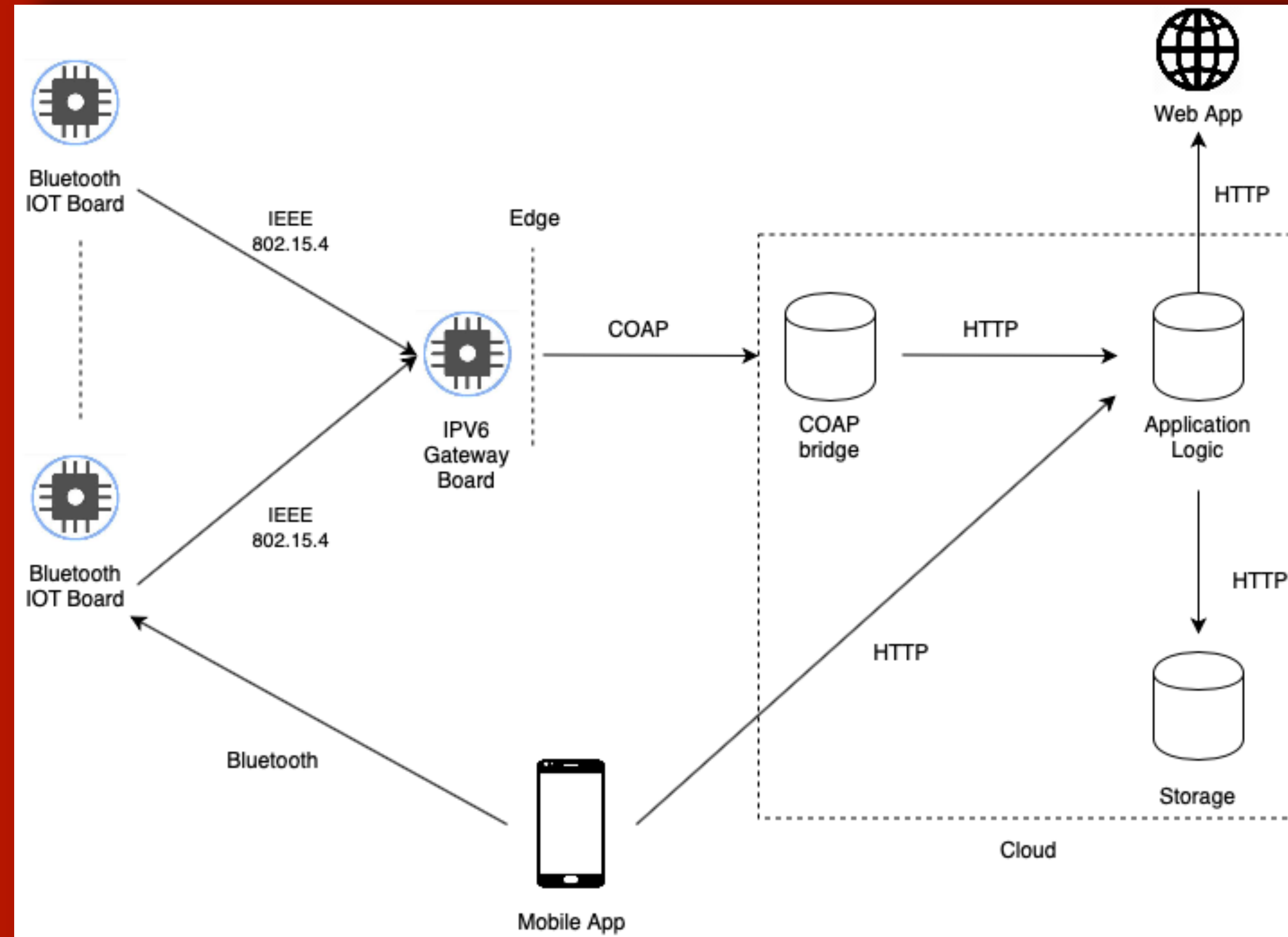


Curator interaction

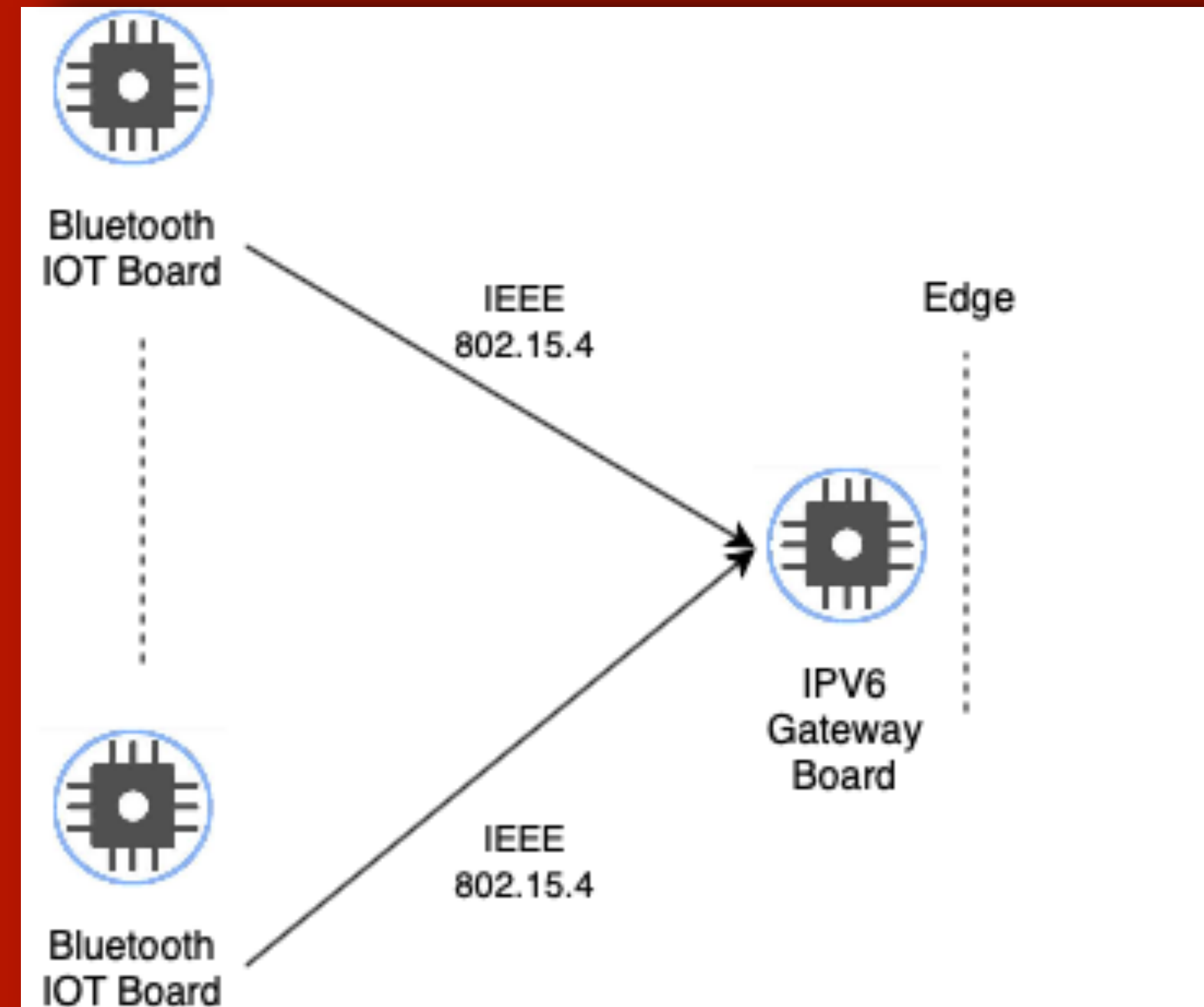


The website will give the curators access to statistics about the users' behavior, like most viewed art pieces, average time spent in front of an artwork, heat-maps of the users' positions inside the museum and favorite routes, and will inform them if any of the Bluetooth beacons it's not working properly.

The Architecture



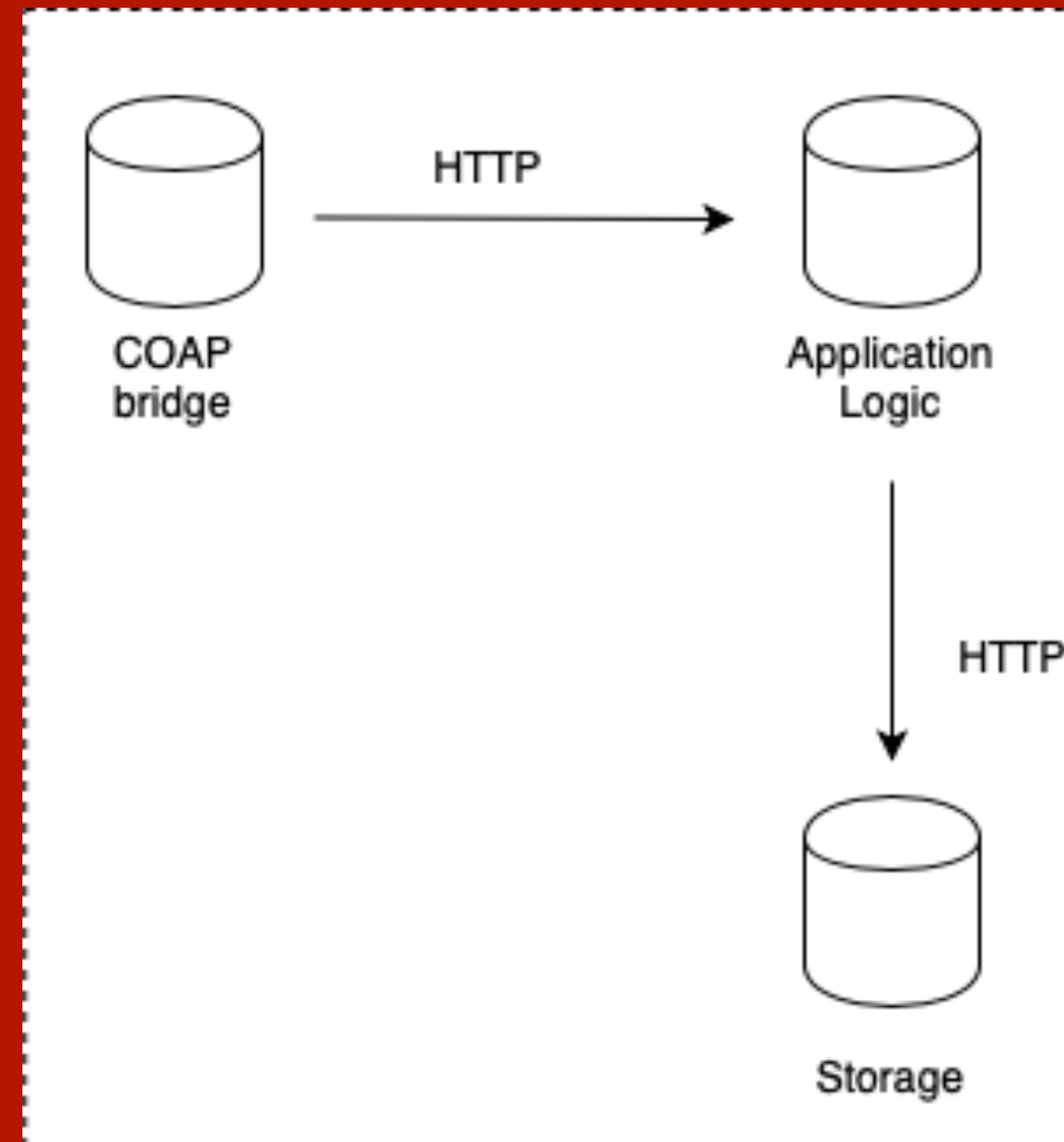
The Local Network



BT Board: nRF52840DK (<https://www.nordicsemi.com/Software-and-Tools/Development-Kits/nRF52840-DK>)

IPv6 Gateway Board: STM32 Nucleo (<https://www.st.com/en/evaluation-tools/stm32-nucleo-boards.html?querycriteria=productId=LN1847>)

The Cloud Infrastructure



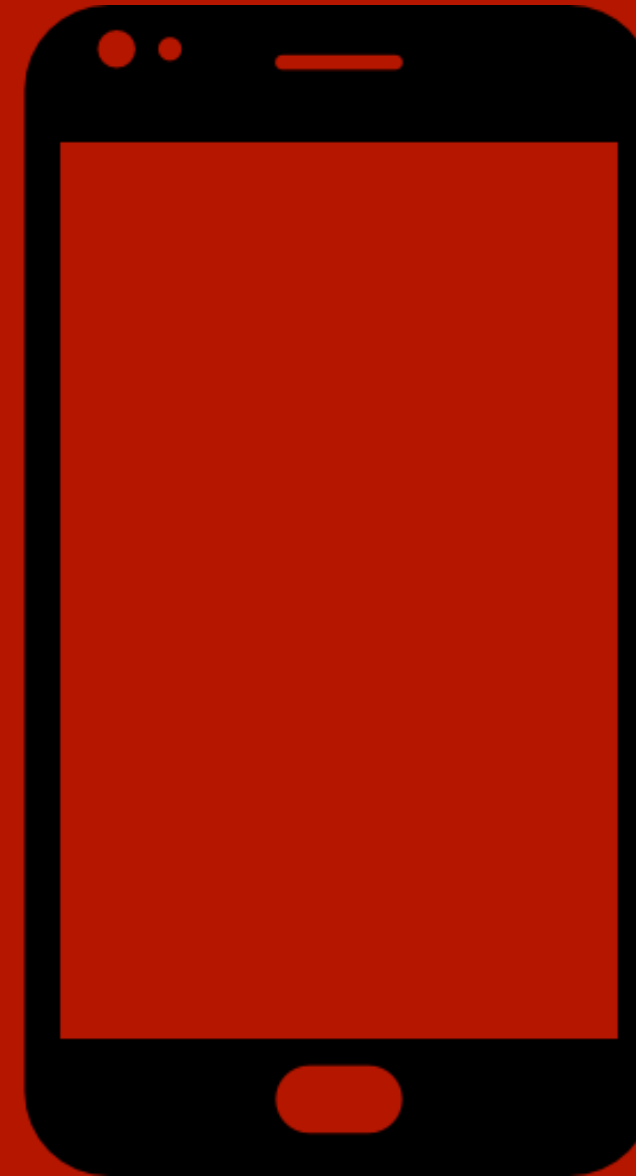
COAP bridge: PONTE (<https://www.eclipse.org/ponte/>)

Application Logic and Storage : Firebase (<https://firebase.google.com>)

End-user Components



WEB APP



MOBILE APPLICATION

Web App: REACT (<https://it.reactjs.org>)

MOBILE APP: XAMARIN (<https://docs.microsoft.com/it-it/xamarin/xamarin-forms/>)