Project Report: Metasecure website

Group number: 3

Class: SE6387

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Team member: Zizhao Chen, Carlos Martinez, Joanne Wu

1. Introduction

1.1. Project Description

For our project, we decide to build a website that looks like https://forta.org/ or https://www.metasecure.ai/ for our client. They provided us with a detailed design for the website. And we also want to optimize the website like loading speed to want a better user experience. We planned to use React for front-end design since it works more efficiently than Vue and we are familiar with the tool. React is also flexible and customizable for different devices. For testing, we decided to use selenium and test on different web browsers to see whether our code works on them or not.

1.2. Goals of Project

- Set up a website called Metasecure according to the client's design
- Optimize the website loading speed
- Make sure it is compatible with different device
- Test on different web browsers

2. Problem and Challenges

Our main problem was that the client for one reason or another, needed the website more urgently than anticipated. For this reason, they contracted another person to do the project instead. We were then instructed to abandon our efforts in trying to make the website, and instead work on making the website that was built by the other person faster.

Another big challenge we faced had to do with communication. At no point during the semester did we ever have a single direct communication with the client. We did however request to speak to them directly, but because of the language barrier between us, it was recommended that we continue to communicate through the professor instead.

Another problem we encountered was figuring out how to optimize the website. We tried several ways to make the code cleaner and the file smaller to reduce the size so the website could load faster for the users. We found that different file type of font has different file size and WOFF2 is faster than TFF. WOFF2 is also supported by all major browsers. Another thing we discovered was the images that use SVG file type was big, so we changed them into a base64 string. This way the website will load faster since the size is reduced.

At the end we used PageSpeed Insight and Pingdom Website Speed Test. We have 50% decrease in size, 26% decrease in load time, 23% decrease in calls needed to be made.

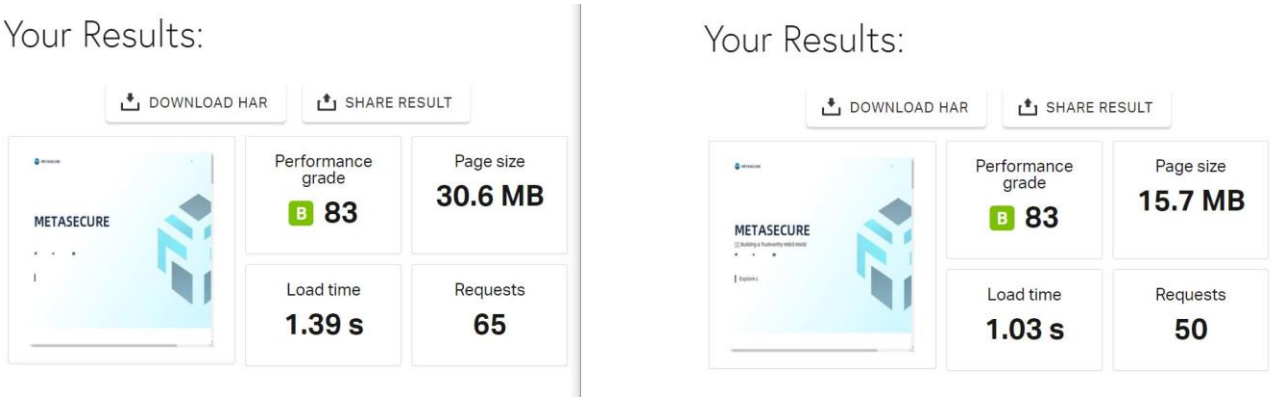

Figure 1

3. Architecture and Design

3.1. Architecture

Our implementation is currently a single web page split into 6 unique sections including the Navbar, Jumbotron, ProductFeatures, Partners, Teams and Footer.

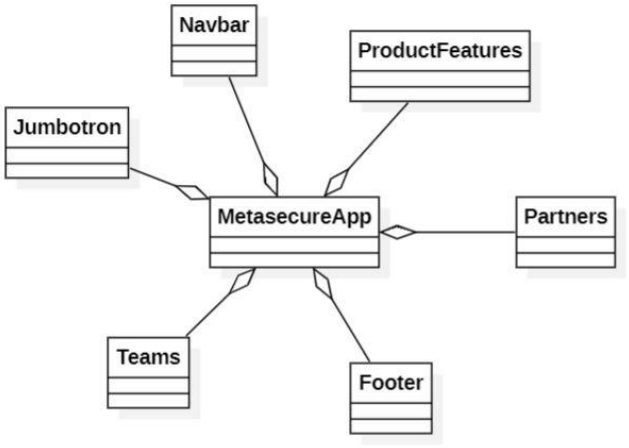

Figure 2

3.2. Design

The client provided us with a detailed design of what they want the website to look like. They have specific design for spacing, so we have several CSS files to have the right padding and margin for the website.


METASECURE
Home
Products
Team
Resource
METASECURE
Buidling a Trustworthy Web3 World
Explore ↓
Automatic detection of smart contracts
Automate the security detection of your smart contract code, identify vulnerabilities and help developers locate vulnerable code and repair code.
7 / 1492
HIGH
1
MED
3
LOW
5
Reentry vulnerability
Reentry vulnerability
Vulnerability: Reentry vulnerability
Line: 60

Figure 3


File
URL
Address
Drag the file here to upload
Convenient code upload method
Upload code file for code analysis
Complete analysis reports
Output all detection results, including vulnerability code localization
Complete detection capability
Cover most of the smart contract SWC vulnerabilities
Click here to apply for a trial
About us
MetaSecureLabs.io is founded by a top-notch team with wide background including crypto, cyber-security, economics, finance&risk control, cloud software architect, and senior marketing veterans.
Based on the concept of continuous security threat and risk assessment (CARTA), it focuses on providing data-driven security and trust measurement service for web3 projects, namely Trustworthy as a Service (TaaS). MetaSecureLabs.io, provides continuous and accurate security threat and risk assessment mechanisms in different application scenarios (e.g.,Smart contract, NFT, Protocol, Tokenomics of web3 systems and projects) . We believe that a trustworthy understanding of project semantic (code logic), core data flows (e.g., token txn) and the tokenomic incentive models are the key to help build a true valuable world of stable and secure web3 systems

Figure 4

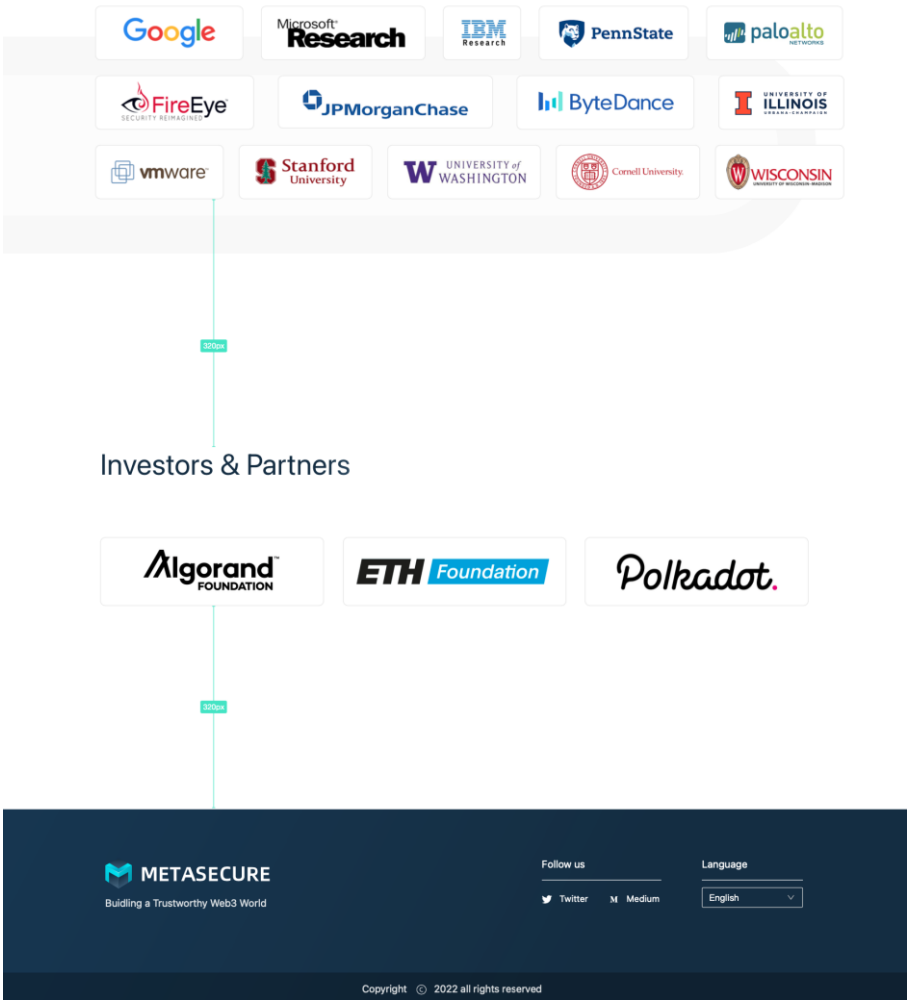

Figure 5

4. Appendix

To run the automated tests:
-Download all 3 webdrivers for google chrome, microsoft edge, and mozilla firefox.

-Make sure python is installed on your machine.

-Run the main.py file.

Here is the link to our GitHub page for more information:

https://github.com/neongala5/web3-website