



Maskify

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The Team,

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Overview

Maskify is a full stack B2B SaaS Application envisioned to measure mask compliance in retail office, and workplace environments.

Goals

1. Provide small businesses with measures to ensure mask usage compliance
2. Protect the privacy and security of user and all patrons

Specifications

Full stack B2B SaaS MVP built with Nodejs, ExpressJS, MongoDB, JWT Auth, React, Tensorflow, TensorAct, React useContext.

Branding


Our colors are as follows:

```
notQuiteBlack: "#101522",  
veryPurple: "#4B59F7",  
purplishBlue: "#0467FB",  
clearlyWhite: "#fff"
```

FAQ

I. What is maskify?

Maskify is a B2B SaaS application that provides small businesses with Live Compliance Information regarding mask usage. The Application is designed to embrace office, and retail environments, consuming a live camera feed to function. The application analyses the live feed using our custom "TensorAct" Artificial Intelligence Pipeline and displays mask usage statistics very ergonomically through its modern and responsive user interface. Maskify is powered by Node.js, ReactJs, Express, MongoDB, and our aforementioned "TensorAct", which is our very own custom artificial intelligence pipeline based on Tenorflow.JS, Blazeface, and our in-house trained Mask-Net. The app has a modern UI/UX, inspired by many successful SaaS websites (e.g. render, shopify, and salesforce) which businesses can use to quickly deploy their live cams to monitor mask usage compliance. The on boarding process is very easy. The intention is for businesses to deploy live cams to a local server provided by Maskify, which will in turn analyse all the people in the feed to determine the usage of masks. The app will log relevant stats to the React State and Node/Express/MongoDB backend where it is stored. Each user has separate and encrypted data secured by JSON web tokens. In the Dashboard, users can see how many individuals in sight of their webcams have passed by, the amounts of which



wore masks, and the amount of people who have not. The data is stored as long as the user desires. The app is currently in open-beta and can be used by anyone for free. Privacy wise, all data is encrypted, and since the AI runs entirely client side thanks to monumental performance increases powered by "TensorAct " the camera live feeds remain completely within the private networks of the client.

II. What was the inspiration behind Maskify?

Seeing the vast impact Covid-19 has had on small businesses, we (the Maskify team) decided to do our part and try to provide relief to small businesses. Knowing that mask compliance is key to both preventing the spread of the coronavirus, and preventing fines. Maskify is a simple way for these businesses to make sure their customers are wearing their masks while in the store. Maskify is a great SaaS product for any business that needs to ensure mask compliance through software.

III. What sort of technical difficulties were encountered?

Maskify is a highly complex Full Stack application with JSON web token authentication, Mongo Database, and an entire custom built AI pipeline! Development of this was not an easy task whatsoever, but the hardest part was certainly time management. The biggest problem we the team faced was "crunch" which is a big problem in the development industry at large. Due to poor planning (we did not make significant developments to the codebase until around Oct 3rd.) We had to work very long hours to maintain our milestones, sometimes working up to 18 hours daily. Another monumental issue we faced was the enormous initial scope that we envisioned. Initially, Maskify was intended to scrape thousands of live street cams from all over the nation to perform the analysis of mask usage across the entire country! As amazing as this idea sounds, it would require thousands of dollars of server hosting daily just to work- not a problem for a company like Google, but certainly a problem for us. Realizing the problem in scope just days before the competition devastated our team, however we rushed to find a new scope. Thankfully, what we ended up with is what Maskify is now- An application to help small businesses manage their compliance of mask usage!

IV. Maskify 2.0!

Maskify is currently a Minimum Viable Product in the beta stage, there are still many bugs, and inconsistencies within the codebase due to the rapid development stage. One feature that we could add is a "face signature" which would allow for businesses to see the specific people who are not wearing masks- we did not include this in the current application due to privacy concerns, however.