

Project: RAT (Rapid Antigen Test) Tracker

Problem – The Context

With workplaces such as schools returning to in-person schooling, demanding the staff to conduct daily/weekly Rapid Antigen Tests (RATs) on their own to determine if they have been contracted with the COVID-19 virus, it is becoming difficult for the administration to track and validate the results from each test. Being able to submit and validate RAT test results on time is important for work environments to comply with health and safety regulations for the current pandemic conditions.

Submitting in your RAT test result every day can be a hassle and time consuming for employees. It is also difficult for administrators to track every RAT test result on a daily/weekly basis.

All this leads to a simple question:

How might we improve the employee and administrator experience of meeting these testing requirements?

Business Value – The Application

Certain industries are now being required to ensure their employees are testing regularly against COVID-19, which introduces both additional administration costs and opens them up to regulatory compliance. The administration costs of such testing schemes can be reduced, and the possibility of being penalised for breaching testing requirements can be minimised by improving the process for employees and administrators.

Introducing a way for administrators to easily track RAT results would significantly reduce time performing this task and the chance of missing an employee's RAT result.

Personas – the users

- I am an employee working in an industry/workplace where we are required to take RAT tests regularly. I want to be able to tell my workplace quickly and easily when I have taken a required RAT, so that they know I am following our testing requirements.
- I am an administrator of a workplace required to have staff regularly tested against COVID-19. I need to make sure that the RAT test results submitted by current employers are validated and on time before they can return to their workplace, so that we meet regulation requirements.

Scope – the requirements

- I want to be able to effortlessly submit my required RAT test results to my workplace to show proof that I am following testing requirements, as well as update them on my COVID-19 status
- I want to be able to get an overview of the RAT tests conducted by my employees to ensure we are meeting regulatory requirements
- I want to be able to confirm that employees have taken a test, so that I have evidence of compliance

Stretch Goals – *suggestions if you find your team gets through the basic requirements quickly.*

- I want to be notified when an employee test positive, so that I can quickly find a replacement
- I want to be notified when I have not submitted a required test
- I want employee tests to be verified with ML/Computer Vision, so I do not need to check each submission
- I want to be able to see the trend of positive cases in my workplace

Recommended Tech Stack

- React - Material UI (or your favourite component library)
- AWS Amplify / Heroku / Firebase for front end hosting
- AWS Rekognition/ Google Cloud Vision / Azure Computer Vision
- AWS Lambda + DynamoDB + API Gateway / Google Cloud Functions + Cosmos DB + API gateway / Azure Functions + Datastore + Application gateway
- AWS SNS/SES
- Automation Anywhere