MVP: Academic Tracking

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May 21, 2020

EXECUTIVE SUMMARY

Objective

Objective to Handle the Online classes more efficiently and securely while monitoring and assessing students and teachers activity during the classes.

Proposal

Software for Online Classes that will be installed on the user Laptop/Mobile/Pc and start monitoring User Activity in the environment and also in their systems.
Providing Insights, Reports, Stats, Control on Web Based Platform.
Integrating Multiple Online Classes Platform with system e.g: Google Classroom, Zoom etc.

Project Outline

Project is divided in two parts:

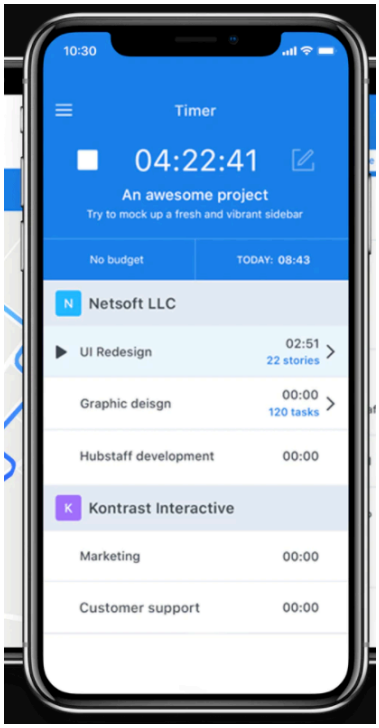
- Tracker - App that will be installed on user machine for monitoring.
- Web App - Web Based Platform for All Controls, Insights.

Tracker

Tracker is a simple app that will be downloaded on Available platforms e.g Windows will have Exe File.
Mobile Phone users will be provided with the Android App.

Layout

The layout of Tracker will be simple where all the available upcoming classes will be shown on the list. When the user clicks on any of the given classes to attend.



Functionality

The tracker software will ask for certain permission to access GPS, Camera, Mic, and screen share after attending Class. Camera will either take pictures or live stream the recording of the user with mic. Screen will be monitored with random screenshots in a single minute e:g 10 screenshots for 30 seconds. All of the data will be send to database via API hits for more analysis about user activity and given score accordingly.

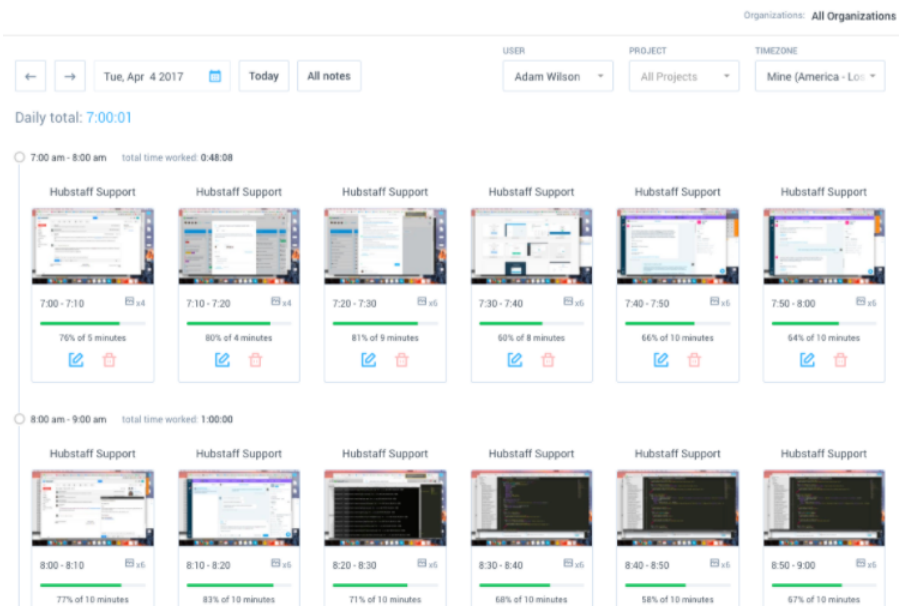
Web App

Web Bases monitoring application will give all insights, controls that are needed to handle students and teachers at the same place.

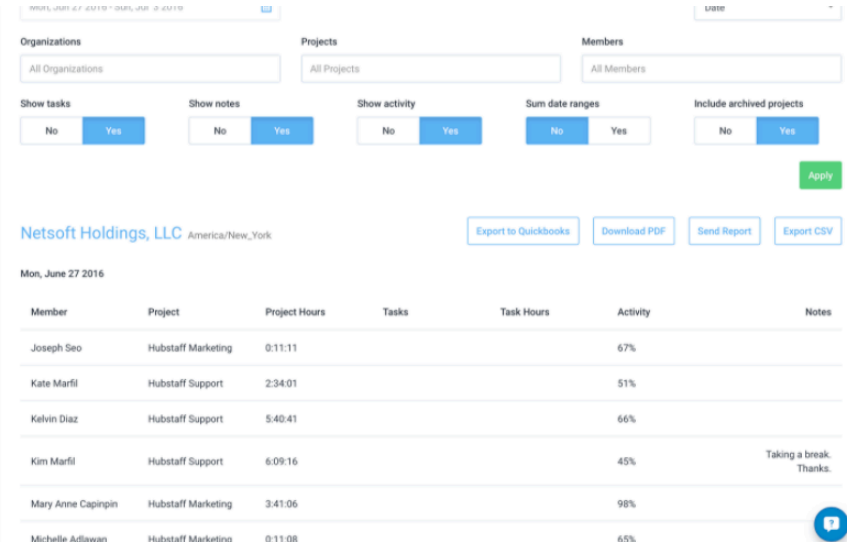
- Activity Tracking Insights
- Automated Reports
- Timesheets
- Class Scheduling
- Integrations (Google Classroom , Zoom)
- Students, Teachers Managements

Layout

Activity Insights

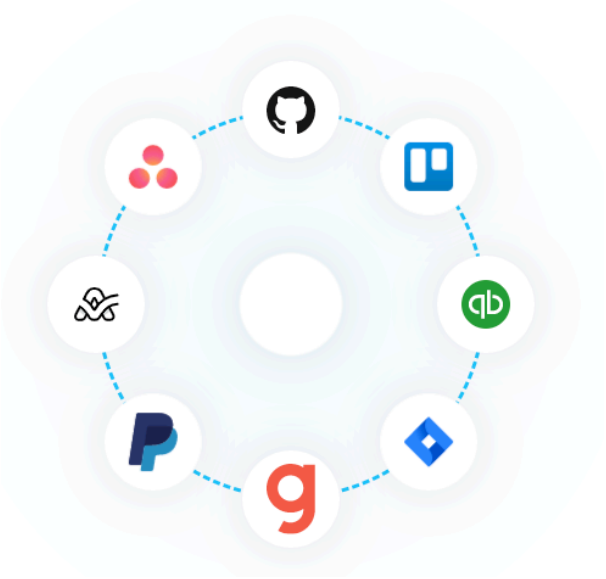


Automated Reports



Integrations

Connect with Educational Apps, Sites for handling Students, Teachers and their Class Scheduling.



Technologies Environments

The products, technologies and tools to be used are the following:
Databases: Postgres (Production) , SQLITE3 (Development)
Programming Languages and Frameworks: Python, Javascript, Typescript, Java, Nodejs, React js, SQL, XML, JSON, REST, Django REST, React Native, WebSockets, Django Channels, Sass, Scss.
Web Servers: Nginx, Gunicorn, Serverless AWS, S3 Bucket for Storage, EC2.

System Requirements

Browser Compatibility

1. The App should be able to display the website with full functionality in the following browsers. Display details may vary.
    a. Internet Explorer 8.0 and 9.0 (Windows)
    b. Firefox (Windows, Mac)
    c. Chrome (Windows, Mac)
    d. Safari (Mac)
    e. Mobile Browsers (iOS Safari and Android Browsers) on current devices

Cookies

2. App must be able to attach and read first party cookies to a user's computer for purposes including site analytics, user recognition and personalization and cross-site handoffs. The site must also be able to function when users have cookies blocked, disabled or deleted.

Scaling

3. Load balancing will occur multiple servers to handle 250,000 unique visitors a month right now and later handle 500,000 unique visitors a month once all the partners are brought online.

Error Handling

4. Special error handling will be provided for at least the following HTTP errors: 404, 403 and 500
    a. The CMS should have error pages that match the site's branding and theme including customized, editable content.
    b. Each error page should have analytic tracking codes so the webmaster can track errors occuring on the site.

13. CMS support for HTTP redirects
    a. The CMS should include an interface that allows the web master to redirect inactive URLs or vanity URLs to an existing page on the site, for example using HTTP 301/302/307 redirect responses.

Search Engine Optimization

14. Each page should have the following meta tags fields available to the content writer.
    a. Title
    b. Meta description
    c. Keywords (currently being used to guide content authors on keywords when write new copy or when optimizing new images)
    d. Search engine access
    e. Image alt tags
15. Ability to add new or custom metatags like the ones needed to validate a site's owner using Google Webmaster tools.
16. Ability to manage robots.txt details from the CMS to control search engine access.

URL Structure

17. URLs should be able to be customized or be generated with human readable, keywords separated by hyphens, SEO-friendly text

A/B and Multivariate Testing

18. The system will not provide structured tools or support for A/B or multivariate testing, although these capabilities will not be prevented. These may be introduced at a later time

Analytics

19. The CMS will support adding analytics tracking code to every page
    i. ability to apply a tracking code globally from site footer
    ii. ability to apply a tracking code to an entire section of the site
    iii. ability to apply a tracking code to individual pages by having a specific section for
21. Easy way to add retargeting tracking code to every page
    i. globally in footer and individually or by site section

Infrastructure Robustness

22. The system should be able to run on an operating system and infrastructure platform that interoperates readily with other aspects of the GLSEN digital infrastructure.
23. The system should not require any custom or proprietary infrastructure components.
24. Production hosting environment and servers should be able to have the necessary redundancies for nearly 99.9% uptime
25. Production hosting provider should mitigate the risk of a system outage or web service outage that may cause data loss.

Pre-Production or "Preview" Environment

26. The solution should provide staging or preview capability to test new content, categories or other site changes.

Workflow

27. The CMS should support approval and scheduled publication workflows, although only simple workflows are expected to be implemented in the first phase.

Security and PCI, HIPAA Compliance

28. The solution will include reasonable application and review of industry standard security measures appropriate for a site of this nature.
29. The solution does not include auditable conformance with industry security standards including PCI or HIPAA.

Web Accessibility Requirements

30. The site is expected to consider reasonable support for accessibility standards and the solution will not preclude or constrain the ability to meet accessibility standards.
31. The site will not be audited or guaranteed to conform with accessibility standards
    a. Section 508 (http://www.w3.org/WAI/Policy/)
    b. Canadian Handicap Accessibility