UNIVERSITY OF PLYMOUTH

PUSL2021 Computing Group Project
Project Proposal

TrackZen

Productivity Monitoring System

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Overview

After researching and talking to industry experts we came up with the idea to innovate a system for monitoring and analyzing an employee's productivity and mood/mindset. And it is called "TrackZen". We are mainly focusing on employees who are working remotely from home.

What is TrackZen

TrackZen is a system that combination of Web applications, Mobile applications, and Systems that run as a service in users' computers and gives a total report about collected data at the end of the day or week.

This system will take screenshots every 10 minutes during working hours (9 a.m. to 5 p.m.) and the screenshots will be analyzed through an Artificial Intelligence algorithm to collect the user's digital activities. After analyzing the collected details stored in the database /server and web application will display those details like the user's work habits, the time spent on different applications, and how to optimize the user's productivity.

The mobile application on the other hand will do the same things as the web application but other than that we aim to analyze the user's interactions with social media platforms. For that, we use social media companies' APIs to get information about user interactions, including posts, likes, and comments and from that information, we will get an approximate idea of the user's mental status. Also, those mental status/ mood data or productivity data can be checked by users themself, and also it can be checked by the higher management of the company and they can take an idea/action according to the reports.

When considering privacy, we put a high priority on user privacy and ethical considerations. Our system will operate with full transparency, receiving user approval and sticking with data privacy laws. Also, we will encrypt screenshots and decrypt them only for analysis and after that, we will permanently delete those screenshots because of security reasons. The main goal is to respect user's privacy while giving them a useful tool for self-improvement.

Objectives

- **Increase Productivity:** The main goal is to have more staff members be more productive overall during working hours.
- **Time Administration:** Set deadlines for tasks (9 a.m. to 5 p.m.) and encourage employees to stay focused on their responsibilities to help them manage their time effectively.
- **Reduce Distractions:** Can minimize distractions during working hours and increase the amount of time you spend performing productive work by restricting access to websites and applications that aren't necessary for your job.
- **Decision-Making Driven by Data**: Give management relevant data and insights so they can make responsible decisions regarding how to allocate resources, the performance of teams, and care for staff members.
- **Employee Motivation:** Support greater employee engagement by recognizing and rewarding top performers and resolving any issues or challenges that can harm motivation.
- **Mental Health Awareness:** Keep an eye on social media mood and activity to learn more about the mental health of employees. This makes it easier to spot stress or mental health problems and give support when it's required.
- **Compliance and Accountability:** Guarantee that employees follow the corporate policies and privacy, data protection, and internet usage laws.
- **Company Reputation and Brand Management:** Monitor and handle the online reputation of the company by making sure staff members follow the company's principles and guidelines in their public social media posts.

Target Users

We are mainly targeting IT-related companies for this project. Therefore, below are our main target users.

- **Management and Supervisors:** These individuals will use the application to monitor the efficiency of their teams and confirm that employees are productive throughout working hours.
- **Human Resources Department:** HR departments could use the application to measure employee performance and identify potential issues before they have a chance to have a negative impact on the workplace in general. And also, them can focus on employees' mental health/mood according to the mindset analysis report.
- **IT and Security Team:** These people would be in charge of maintaining the company's security and employees' security, securing data privacy, and taking action to stop any potential breaches.
- **Employees (SE/QA/PM):** By using this application they can track down their own productivity during work hours or understand their social media usage habits. By using this self-analysis, they can improve their productivity and work-life balance.

Application Features and Description
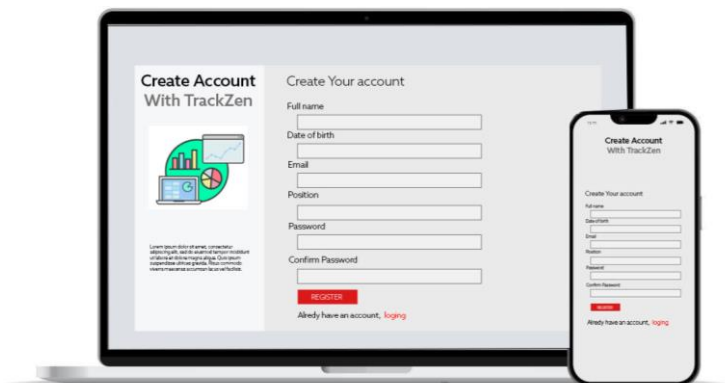
- **Company Owner Registration** - Company owner have to create account in our application.

- **Company Owner Login** - The company owner will login to our application by entering the username and password he or she used to create an account.
- **Employee Login Account** - Log in to this account using the username and password sent to you by the company owner
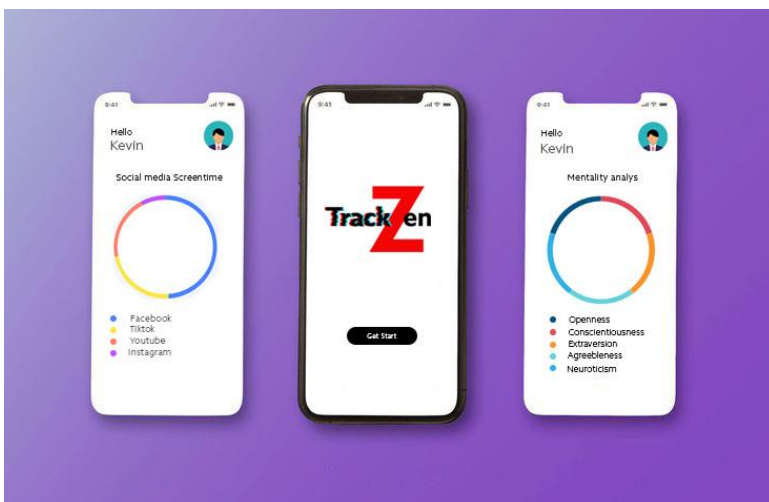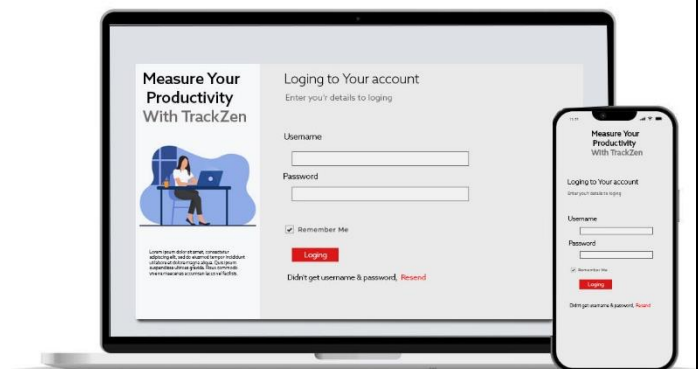
- **Workers Mental Health Checking** - When the worker using their social media then we get in some idea from workers social media profile and what kind of things he or she shared and looking. We send mindset analysis report for workers what kind of situation you are in, for example aggressive, sad, good or frustrated.

- **Screen Time Managing** - User can get insight into how long you use the mobile apps and laptop applications.
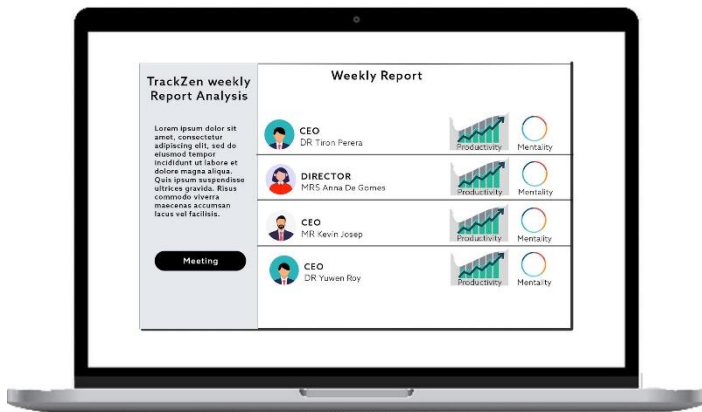
- **Weekly Report** - Week report send to company head management to inquire workers productivity and will be store in databases for later users.

- **Security Check:** In the Web application user can look what are the web sites that user visited and what those website gets from user as data. From that user can aware about the security

- **Productivity Analysis:** Also, user will get productivity analysis report every day from the data collected from that screenshot.

ER Diagram
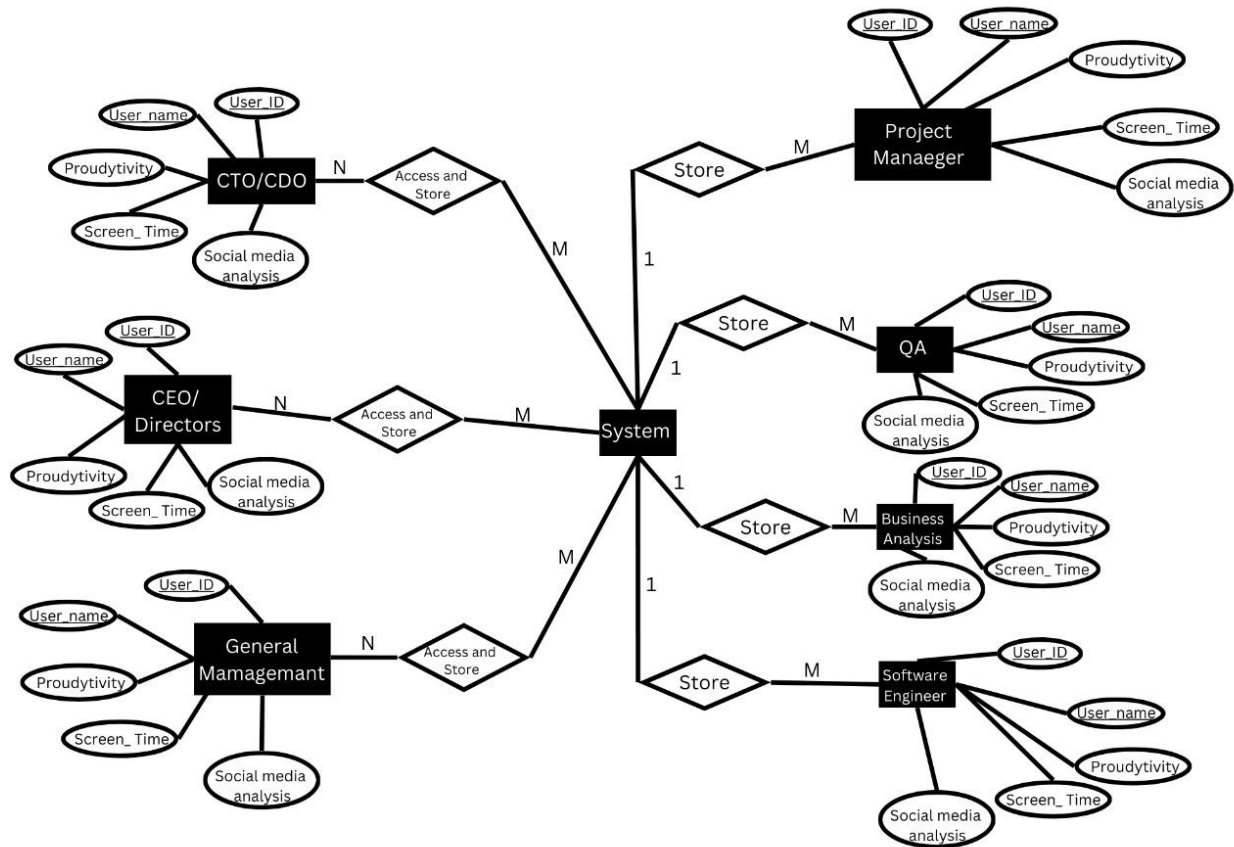
Time Frame / Gantt Chart

Project Start Date: 13/9/2023

ID	Activity	Duration	Start Date	End Date
	Project Name: TrackZen			Start Week
	Start	Duration	13 Sep 2023	13 Apr 2024
1	Project Planning	30	13 Sep 2023	24 Oct 2023
1a	Project Idea Research	19	13 Sep 2023	9 Oct 2023
1b	Finalize Idea	3	10 Oct 2023	12 Oct 2023
1c	Choose Right Models	3	13 Oct 2023	17 Oct 2023
1d	Determine App Features	5	18 Oct 2023	24 Oct 2023
2	Requirement Gathering	17	16 Oct 2023	7 Nov 2023
2a	Product Requirement Document	4	16 Oct 2023	19 Oct 2023
2b	Prioritize Requirements	4	19 Oct 2023	24 Oct 2023
2c	Requirement Gathering	11	24 Oct 2023	7 Nov 2023
3	Design	17	8 Nov 2023	30 Nov 2023
3a	UI Design	12	8 Nov 2023	23 Nov 2023
3b	System Design	8	11 Nov 2023	22 Nov 2023
3c	Database Design	7	21 Nov 2023	29 Nov 2023
3d	Security of Design	4	27 Nov 2023	30 Nov 2023
4	Coding/Implementation	30	5 Jan 2024	15 Feb 2024
4a	Setup Development Environment	3	5 Jan 2024	9 Jan 2024
4b	System Development	10	10 Jan 2024	23 Jan 2024
4c	Web Application Development	8	24 Jan 2024	3 Feb 2024
4d	Mobile Application Development	9	4 Feb 2024	15 Feb 2024
5	Testing	10	16 Feb 2024	29 Feb 2024
5a	Functional Testing	5	16 Feb 2024	22 Feb 2024
5b	Usability Testing	3	21 Feb 2024	24 Feb 2024
5c	Performance Testing	3	25 Feb 2024	28 Feb 2024
5d	Overall Testing	3	27 Feb 2024	29 Feb 2024
6	Deployment	21	1 Mar 2024	31 Mar 2024
6a	Fine Tuning	14	1 Mar 2024	20 Mar 2024
6b	User Feedback	7	21 Mar 2024	31 Mar 2024
7	Maintenance	10	1 Apr 2024	13 Apr 2024
7a	Feature Updates/Backups	7	1 Apr 2024	9 Apr 2024
7b	Post Mainatanence Review	3	10 Apr 2024	13 Apr 2024
	Finish	0	13 Apr 2024	13 Apr 2024