



North South University

Department of Electrical & Computer Engineering

Project Proposal

Group No: 1

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Project Name: STUDY TRACKER

Course No: CSE 299 Sec: 2

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INTRODUCTION

The name of the project is “Study Tracker” and the purpose of this app is to monitor the study time of the students using the camera of the device. The project will be available as an android app (main goal) and as a website (future goal). This app will be able to recognize the user and identify the amount of time he/she has spent on a particular material.

Study Tracker is designed to use both the face recognition API and eye tracking API to confirm whether a reader is actually reading or not. The idea is based on Google Classroom. Through the Study Tracker, any user can create a classroom and upload materials. Students, in this classroom, can access and read the materials using this app or the website. Additionally, their facial information will be tracked to recognize and verify whether he/she is the actual user. Their eyes will also be tracked while reading the materials. Inside a class, the creator can monitor the reading time of the students and the amount of time a material is read. Furthermore, if the creator wants, they can view the statistics of the individual students in the class.

FEATURES

- Sign-in process using facial-recognition.
- New users will be able to sign-up using their email address. Existing users will also be able to sign-in using e-mail address. If that email address is already registered, the user will be shown a window, where he/she needs to provide password. But if the email doesn't exist, then a sign-up window will be shown.
- The app will be tracking the eyes of the reader and will understand if the reader is reading or not. It is an instant process, so eyes are being tracked real-time.
- The system will be using eye tracking to determine the amount of time users spent to study using this application.
- The system will be using facial recognition to determine the identity of the user and update his/her study time.
- The system will perform as an online classroom where teachers can upload materials and students will be able to read the materials.
- Random code will be generated for individual class. So, to join an existing class a user must provide the specific code.

TECHNOLOGY

Frontend

For the front end we will be using Android with Java and XML. XML and Android programming will be used to create user interface.

Backend

Python's web framework - Django will be used as the application's backend. Django ensures rapid development providing high security and maintenance.

This application uses an eye tracking API and a facial recognition API which uses smartphone camera for eye tracking and facial recognition.

Database

We will be using SQLite and Json objects to handle our entire database.

Additional Information

The app can run on android devices which have version 5.0 (Lollipop) or more.

MONETIZATION

We will try to make our product subscription based and sell it to different schools and colleges. As the young people need constant monitoring on their studies, they make the perfect audience for our product.

Educational institutes can also place their ads on the website after it is launched, which will help them advertise themselves to the audience.

SOCIAL ASPECTS

This project would be beneficial for the teachers who want to monitor their students. The teacher will be able to check in the students whether they are studying properly or not, and it is also easy to track their progress.