

Project Goals and Description

Spotter

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Overview

A common problem amongst people who are just starting to hit the gym is improper form. If you do not address this right away, this improper form will trickle into all your exercises and eventually lead to injury. The current options for getting help at the gym are hiring a personal trainer or watching videos and then trying to replicate the instructor whilst looking in a mirror. Both of these are non-ideal options since personal trainers can be expensive and not everyone can afford them and trying to maintain proper form in front of a mirror is not always an option and even when it is, your viewing of your own form is limited.

With Spotter, you use a webcam or a camera from mobile devices to monitor yourself while you are working out. During the workout, Spotter will notify you if you have bad posture and will also store the metadata from your workouts to help you improve your form overtime and track progress. Spotter is the cost effective and convenient solution to avoid potential injuries from working out.

Product Goals

Goal	Importance
The finished product is able to track user movement/position using a camera, and displays an overlay on landmarks (joints) being tracked.	<ul style="list-style-type: none">- The ability to track user movement and position allows the application to analyze and suggest corrections to the user's form and various exercises.- Tracking user movement and their position is a fundamental part of the application's functionality.- The ability for users to see which joint is being tracked allows for a better user experience as they have an indication that the app is tracking their movements.
The finished product will have pre-built movement constraints that it will use in order to track user movements during a number of different exercises.	<ul style="list-style-type: none">- This allows the user to have their form checked for various exercises.- Pre-built constraints allows the user to get started faster
The finished product allows the user to create custom movement constraints in order to fit their specific exercise goals.	<ul style="list-style-type: none">- The ability to add custom constraints allows users to be able to have spotter track exercise form for exercises not already built in.
The finished product allows the user to count the number of reps correctly done for various exercises that can be stored as historical workout data.	<ul style="list-style-type: none">- The ability of uploading and storing workout data allows users to analyze their workouts and further improve on their exercises in future training sessions.

Product Stretch Goals

Goal	Importance
The product is able to suggest exercise equipment for users to help correct bad posture detected by the product.	<ul style="list-style-type: none">- This can add to any additional funding to further enhance our product or create partnerships with other gym brands that contain exercise equipment catered to helping users improve.
The product is able to overlay objects on top of the camera view to show the user how to position themselves to correctly perform various exercises and stretches.	<ul style="list-style-type: none">- For users who are unsure about how to perform certain exercises/stretchers, the application itself can demonstrate how to correctly complete the action.- This functionality will improve customer retention by making Spotter the one-stop-shop for learning exercises and performing them correctly.
The product is able to allow the user to analyze pre-recorded videos	<ul style="list-style-type: none">- Offers more accessibility to users as they can choose to get feedback on their exercises at a later time.- Offers another way for the user to see progress made.