

INFORMATICS INSTITUTE OF TECHNOLOGY

In collaboration with

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-Live workout pose reviewing platform-

Submitted in partial fulfillment of the requirements for the

BEng (Hons) Software Engineering Degree

Department of Computing

Project Thesis

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A dissertation by

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Abstraction

Healthy life is a main goal for every single person. If someone does not have a healthy lifestyle, that person will eventually lose all his wealth and happiness in his life because only with wellness, wealth and happiness continue in life. When a healthy lifestyle is not followed, the person might have to go through surgeries which cost a lot, mental breakdown, unable to perform day to day activities and finally he will end up being a patient lifelong. In order to avoid all these problems, maintaining a healthy lifestyle is important. To maintain healthy life, nowadays a lot of methods are introduced and followed in the world. Most popular method is the workout. In workouts, there are several methodologies and some common methods are gym workouts, jogging, morning exercises and using exercise machines, etc. Here, my research problem part has been highlighted. When considering the physical life and training or doing workouts for body, people can either do those in the correct way or in the wrong way. It will not be a problem if someone is doing workout in the correct way according to their body but for those who practice and continue workouts in the wrong manner, it will be a big problem for their physical health. When considering the society, only 20% of them are doing some kind of workouts from the U.S population (according to Bureau of Labor Statics) to maintain their health. Other 80% of the population is not doing a simple 20 minute walk per day to maintain their physical health. Also by doing some kind of workouts, fitness activities, dancing and sports, people will be able to maintain their physical fitness. When considering the world population, 31.1% (roughly 1.5 billion people) from all population of adults are not achieving minimum recommendation of 150 minutes (20 minutes per day) of moderate activity per week. "If we don't perceive physical inactivity or sedentary lifestyles as a global concern, we're looking at a worldwide decrease in morale, increased obesity in children, and an uphill battle against rising health care costs for everyone."(Amanda-Carlson Phillips, 2012). And the worst part is roughly 5.3 million people die per year because of inactive healthiness tied diseases. (This includes 10.8 percent of all premature deaths). And here in my research I'm not focusing on people who don't work out or any exercise. But as an undergraduate and a person who represent society I'm advising you all to do some kind of workout, exercise for 20 mins at least per day for your own good.

When coming to the topic on the people who do workouts, at first stage more than 60% of them do workouts in the wrong manner but most of them correct their mistakes by getting advices from trainers, books, videos and much more resources that teach them to do workouts correctly. Somehow there are people who do not correct their mistakes and continue doing the wrong poses and techniques. By following the wrong techniques, they become unhealthy again. The main reasons of workout are safety and effectiveness. In here both of these reasons are covered with my research problem. And maintain a healthy musculoskeletal health with better accurate, effective and technically way of exercising and workout. This solution base will help to know what are the stages of trainers and trainees workout accuracy are. By visualized output of workout accuracy, it is simple to understand and make own satisfaction of workouts.

Subject Descriptors:

I.3.3 Picture/Image Generation

I.4 Image processing

Keywords:

Healthy life, workout, safety, effectiveness, musculoskeletal health, visualized output