Virtual Yoga Trainer with PoseNet API

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***Abstract*— This paper covers our findings and learnings while building a Web-app and methodologies associated with it. The core functionality uses a front camera or webcam on a device to detect users pose and matches it to a machine learning model trained using tensorflow.js to determine correctness of the pose. The app built around this idea enhances this functionality by providing several yoga poses along with it's advantages and images to guide users during a yoga workout session. Our aim is to provide a complete guided and automated workout routine for the users along with a progress tracker.**

***Keywords*— Posenet, yoga-pose, workout, progress-tracker, TensorFlow.js, React.js, Authentication, Web-app, Machine Learning (ML), Firebase, Application programming Interface (API), Dataset**

I. Introduction

This is the final report submission of our team project completed during Fall-2019 semester in class of Enterprise software platforms (CMPE-272) at San Jose State University as graduate students.
Our mentor and instructor, Prof. Rakesh Ranjan, Innovation Leader, Director, Emerging Technologies at IBM Data & AI, directed our efforts in this project for selection of technology stack, market research, design thinking process, development and deployment of Virtual Yoga Trainer.

II. TenseorFlow Model

Content to be added.

III. Developing a React Alpplication

Content to be added.

A. Front-End

Content to be added.

B. User Authentication

Content to be added.

C. Google Firebase

Content to be added.

IV. Results

Content to be added.

V. Conclusions

Content to be added.

Acknowledgment

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References

[1] https://medium.com/tensorflow/real-time-human-pose-estimation-in-the-browser-with-tensorflow-js-7dd0bc881cd5

[2]