

The Intelligent Diagnosis and Treatment of Postural Deformities by Analyzing the Given Data from Kinect Camera

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ABSTRACT

Postural deformities are common abnormalities related to the skeleton form, with growing prevalence among people. In the constructed system we have created a method by which any individual can diagnose and treat their postural deformities intelligently with the least requirement of an orthopedic doctor's supervision.

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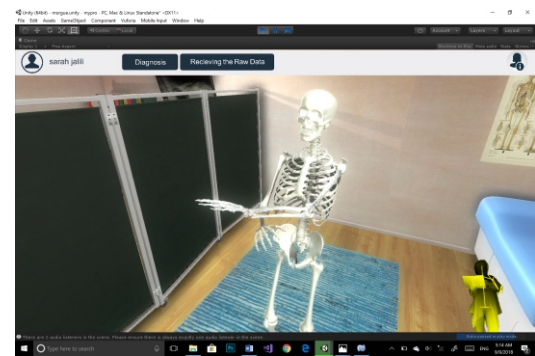
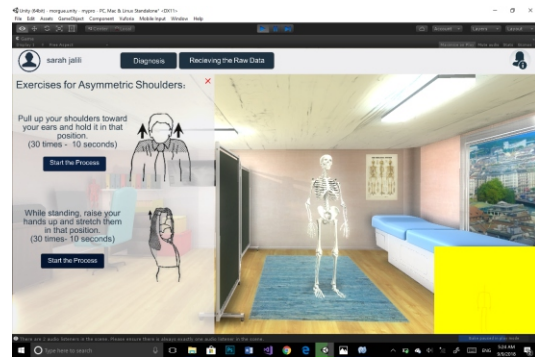
1 Introduction

In the implementation of the project we used Kinect camera, a gaming device provided by Microsoft company, because it has functional features with a reasonable price. The Kinect camera is capable of body tracking, joint coordinating and motion capturing. If the user stands in the proper distance from the camera, the system receives some data from the user's body, analyzing this data, we could implement the diagnosis phase. The treatment of the deformities is defined in the form of different exercises according to the medical references, having these exercises and knowing that Kinect camera is capable of motion capturing, we could guide and monitor the user during the treatment phase. After the enhancement made on the system the accuracy of the whole system was calculated, the results showed that the system provides enough validity for this purpose. This system can be used instead of a doctor in schools and clinics and any places with large number of users, to save money and also the accelerating the amelioration process.

2 Creating a profile for the patient

Before entering the program users will go through a profiling process in which some personal information will be received from them and will be held in a profile with a profile number that will be also provided for the users. As the profile is created an email will be send to the patient's doctor so that the doctor would have access

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