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Literature Review

Contents

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Abstract

In this review, I am going to be informing you the brief issues on Microsoft Kinect. I am aware that there are some strengths and weaknesses of these and I am going to be addressing these issues. They are three papers that I am going to be referring too. The first paper is about Microsoft Kinect used in Education, second is about creating musical expression using Kinect and the last is about using the Kinect Camera for human gestures and its future.

Kinect used in Education

Using Kinect in Education paper examined how Kinect can be used within education. This paper (Hui-mei Justina Hsu, 2011), represents the flexibility of the Kinect. It shows the potential use and its wide range of capabilities within its system. Students can prove how they learn by listening, visualising and when they are physically contributing to what they are studying. A research was directed by Rachael Folds which she tested with the Xbox Kinect with college students that have learning difficulties improved drastically from the scores (Nottingham Trent University, 2011). This shows that not only students who want to extend their skill in the current subject, but also students who cannot learn can have a positive effect in the everyday learning. For example, one of the research that was conducted was playing tennis with the students. I feel that it benefits students with learning difficulties, students whom want to extend their knowledge and for learning in general. For example, if student A were to be sitting down watching student B singing on the Kinect, it would enable student A to alter the way he or she did it the last time. This enables more students to interact and engage with the lesson. Engaging and interacting enables learning to be different and enjoyable. Kinect's applications can be different to which bracket of learning is being used. For example, singing can be used for the Music.

Some of the questions are not raised about the affordance of each school. Hence, some schools that would like to use Kinect cannot afford it. Only schools who can afford Microsoft Kinect can use it in each classroom. Overall, I feel that this paper gives a huge insight into how Kinect can be integrated within the education system. Each benefit was clear fully conducted each of them explaining the flexibility and versatility of the Kinect.

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Creating Musical Expression using Kinect

Using Kinect by creating musical expressions represents the connection between MIDI to Kinect. MIDI data connects with the Kinect by using a 'converter' to make the connection. Yoo, M and Beak, J and Lee I made this happen by using their own Adlib Generator by changing the software to Kinect. This enables users to control it by using a 'general pose' to enable users' activity. More surveys are being conducted.

They have tested the music responds to MAX/MSP, and then they tested it with Kinect. This shows that they have critically analysed what they need to do and how they need to do it. First-hand research highlights that what they are focusing on is important and a success. One the part it lacks within this is that it does not express why it is as important as the others are. The skeleton data shows the detection part of each body. It needs around 23 sensors to detect the whole body movement. This shows the movement of the body.

I feel that creating musical expression using Kinect (Yoo, M and Beak, J and Lee I, 2011) provides a basic research starting with the creation of Kinect used as introduction to the topic. Each subheadings have a picture to enable the users to know what they show in the text. I feel that his is extremely useful. It provides with a very interesting account on Kinect and update readers on about it. At the start, it does break down how the Kinect is used. The three components of it shows what they need to enable the objective of this paper. However, I do feel that more research needs to be conducted. It is short for an article that wants to create musical expressions within Kinect.

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Human Gesture Recognition Using Kinect Camera

Using human gestures recognition using Kinect camera (Patsadu, O; Nukoolkit C and Watanapa B, 2012) shows the recognition of each human gesture such as a wave can be used anywhere.

It can be used anywhere, if it works in one place, it can be used for other stuff. Some of the positives in this paper is very detailed on its topic. The most interesting part of this is how it shows the users it is used. They have even tested out with results how it is going to work. It shows pictures of a person standing up using the camera. In addition, it gives an ending and how it is going to be used within the future. Some of the improvements it can made is that they are using a very risky method to test the potential of the camera within Kinect.

In conclusion, I felt that each paper missing out each one of their own. For example, the first one explains the benefits and drawbacks of Education. The second one explains how it is going to be used. However, the third one gives an experiment of how it is used. This is very interesting and important. Each paper raises questions which equals towards that the Microsoft Kinect is not ready to move on to the next stage. Although all of these three have question marks on it, I do strongly agree the key of innovations that they are trying to hold. Some of these ideas are great, but some aspects of each lack. An idea that I feel is strongly is the Education that expresses the learning for Kinect.

Reference

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