

VA402 PROJECT PROPOSAL

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PROJECT DESCRIPTION

My project is about creating a sound sensitive karaoke dress containing LEDs.

GOALS & OBJECTIVES

The project will show LED movement through sound sensitive sensors on a fabric. It will show us how exciting can be the implementation of LED onto a fabric.

My objective is to catch people's attention with the concept of wearable technology which is a field with endless and striking opportunities. I want to create a great and different experience of listening and singing. Want to make a difference in a daily-life experience.

This dress can appeal both to professionals who deal with music on a daily basis and to us, humble listeners who want to create an extra joy out of the action of doing karaoke.

TARGET AUDIENCE

Music is a field which is so universal and broad, it does appeal to every single human on earth. Whether they are infant, teenager or an adult. Every song has a different impact on different people. Anyone who likes to go to karaoke clubs or sing at home only for themselves and anyone who would like to have a memorable experience of listening to music can be the subject of this project.

For ex; Aslı is a 22 year old and loves to sing. She hasn't got a great voice but loves to enjoy herself by going to karaoke clubs with her friends. While she is getting ready for the night, she puts on the karaoke dress and as soon as she starts to sing in the club the dress lightens up.

BACKGROUND INFORMATION

The project is based on the invention that is called 'wearable technology'. Wearable technology is formed from the marriage of electronics and fabric. The designs often incorporate practical functions and features. In some cases there is a particular goal (in case of fitness gadgets) and some are designed only for fun. I've been following latest news and inventions in the wearable technology field for quite some time. Especially Hussein Chalayan's projects amazed me. In addition to that in my researches, i encountered several wearable technology projects related to sound. The idea of creating visual music seemed pretty fun and also i thought that it would be very attractive to the eye watching the whole process. So eventually my project was born out of this feeling of excitement.

In 21st century, music is always supported by visuals; video clips, short screenings, graphics.. Creating video mapping and graphics for a stage performance is a very expensive job. First i was thinking about only creating LED dress which would lighten up according to the beat. But then after the discussions in class, i noticed that i had to base the project on a specific context. Then came the idea of creating a karaoke dress. This project brings a much more fun way into the act of doing karaoke. We probably all have been to some karaoke clubs while we were teenagers, and i believe that it is one of the funnest social activities. So i decided to place my wearable technology dress project on this context and thought to myself who not to do a karaoke dress which would have also a microphone. Previously looked up to projects with LED screens and high technologies and i realized they were over my head. So doing what i want to do as a DIY project, with a much more artistic approach would be a more realistic idea.

First challenge in this project will be the creation of the dress. I actually want to sew the dress myself, since i don't have such experience of tailoring, i might as well end up buying a dress. Next step will be the implementation of the lilypad, LEDs and the sensors onto the fabric. Biggest challenge will probably be the implementation of those materials onto the fabric. I'll learn how LED works, how to combine it with sound and the most of all, the implementation of LED and onto the fabric.

RELATED LINKS

etextilelounge.com

instructables.com

makezine.com

atmelcorporation.wordpress.com

3lectromode.com

dannyg.com

www.neonstring.com

visualmusic.blogspot.com

wearabledevices.com

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centerforvisualmusic.org

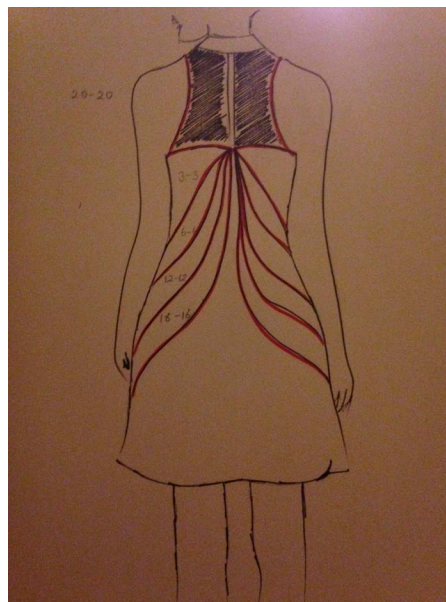
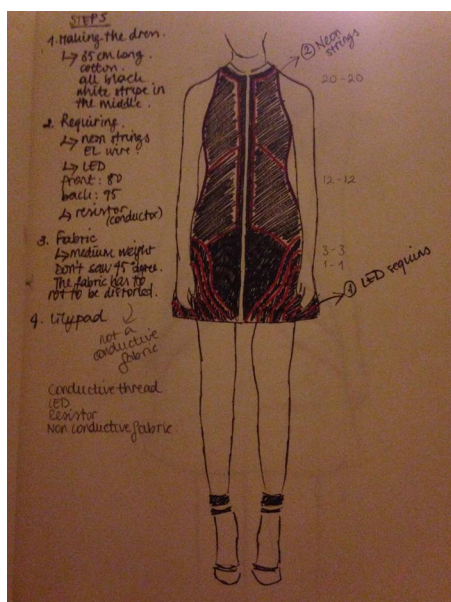
DETAILED PROJECT DESCRIPTION

My project of creating a sound sensitive karaoke dress out of LEDs is a DIY project based on a artistic purpose. It constitutes elements such as; LED, lilypad, conductive thread, non-conductive fabric and a microphone attached to the dress. The user will wear the dress and as soon as the singing action starts LEDs will start to lighten up according to the beat. There will also be a microphone which will be attached to the dress, the user will grab the microphone and as soon as she starts to sing, the dress will know that its own user is now doing karaoke and then LEDs will start to lighten up according to the beat of the song that she is singing. I am planning to buy the dress and when the code is ready i will be sewing the conductive threads and the lilypad.

The dress will be 85 cm long, all black only a white stripe in the middle of the dress. I am not yet sure about the number of LEDs that i am going to attach onto the dress, i will decide on the number when i am done with the prototype. But i am sure that the total number will not be more than 20.

The outcome of this project will be creating a much more fun and memorable way to listen to music and singing through visual music. LED is a tool which enables us pretty magnificent things to do. I do believe that the combination of LED and music will bring joy and excitement to our karaoke experience.

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SCOPE OF THE PROJECT

Will be covering
Sound sensitivity
Visual music

Won't be covering

REQUIRED KNOW HOW

About the implementation of LEDs and lilypad, there are lots of tutorials about how to sew LEDs onto the fabric. I believe that i'll be handling them in an efficient way. The most difficult part will be to write the code which would combine the microphone with lilypad. It seems that i will be using Arduino libraries.

DIFFICULTIES & RISKS

The most difficult part will probably be the writing of the code which will procure the LEDs to be sound sensitive. . The most significant risk would be the code not to work efficiently after implementing the materials onto the dress, the code not to work efficiently. If the code doesn't work the way i want it to, the whole work will go to waste.

PHASES

1. Acquiring necessary sensors, LEDs and lilypad.
2. Getting the dress.
3. Writing the code.
4. Implementation of sensors, microphone, LEDs and lilypad onto the fabric.
5. Hopefully, having a successful functional product.

CRITERIA OF SUCCESS

The first three phases have to be completed by the end of this term. Because the implementation will take quite some time. The criteria to judge this project will be based on the aesthetic look and the functionality of the dress. If i can create really homogeneity and fluidity, the project will be a success for me.

REFERENCES

visualmusic.blogspot.com

wearabledevices.com

wearabletechworld.com

centerforvisualmusic.org

etextilelounge.com

instructables.com