|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Slide title** | **Person responsible** | **Image(s)** | **Scenario** |
| 1 | Hello,  It’s me | ANIA |  | Hello everybody! We are the “TEAM\_NAME” and today we want to present you our story about the problem we have found. But first, let’s introduce ourselves. My name is Ania, this is Mariusz, Michał and Yura. We are four different personalities, with different interests, and we were connected only through the field of study, which is Information Technology. But now, it has changed. |
| 2 | Team work | ANIA |  | We talk almost every day. Together, we prepare for meetings and presentations. We discuss. A LOT. AND OFTEN. That’s why we needed to know how to reach compromises and talk with the biggest efficiency. Together we drank 26 coffees, ate 3 dinners and at least 12 times we did a really big brainstorm. |
| 3 | Topic | ANIA |  | Our topic is “Affecting computing and emotion detection”. According to our first researches we decided very early that our logo will be based on the Candide - the parametrized face, that is presented on the screen. It is commonly used to detect face on the picture. During further analysis of the various candide changes, the emotion detection is possible. |
| 4 | Emotions | ANIA |  | Speaking of… HEY! Did anyone noticed any basic emotion in my last sentence? Are you able to name it? Well, according to the article about Basic Emotions there is a list, called “The Big Six”. To recognise emotion from facial expression we can use that list. It includes happiness, sadness, fear, surprise, anger, and disgust. |
| 5 | Kwiatek | ANIA |  | As we can see from the diagram created by Robert Plutchik from basic emotions we can develop further ones, connected with each other. As you might probably notice, in the middle of the diagram, there are eight slices. That’s because the number of basic emotions depends on the theory. This scientist proposed 8 basic emotions, where acceptance and anticipation are the extra ones. |
|  | Mariusz z autyzmem |  |  | As you already noticed, all of us may have problems in emotion recognition in some situations. Some of those emotions might be also harder to distinguish than the others. .However, let’s focus on the ones, who genetically have the problem with that. What about people with autism? These people in general do not recognise such things. |
|  |  |  |  | Autism is a developmental disorder, characterised by difficulty with social interaction and communication. In most cases it concerns children. People with autism are unable to correctly read any stimuli. |
|  |  |  |  | The dark room might be too bright for them, they hear noise, when it’s totally quite, and Yes! They also have difficulty with distinguishing anger from happiness, when talking to somebody. These people need to be under constant observation, because no one actually knows how would they react in certain situations. They also have many other social problems and tipicly difficulty in communication.. |
|  |  |  | (Ms Ilona kraska) | We consulted our thoughts with a headmaster of JIM charity foundation. She provided us with thorough informations about discussed disease. She also admitted that inability of emotion detections is one of the causes which lead to many social problems considering autistic people. |
| 6 | Biofeedback definition | MICHAŁ |  | Now let’s talk about detecting emotions artificially, meaning - using all kinds of sensors, cameras etc.. To understand it we need to get familiar with the concept of biofeedback. Biofeedback is basically providing people with feedback about changes in their physiological state. |
| 7 | Biofeedback examples | MICHAŁ |  | Example of biofeedback may be simply skin temperature, blood pressure or heart rate. However there are also more complex bioprocesses to be detected, such as skin electrical activity, muscle action potential or electrical activity of the heart. Activation of specific brain parts during particular activities is also crucial. |
| 8 | What is deep learning p.1 | MICHAŁ | Picture of an apple | Now… how to process all that data? Here comes very popular technology nowadays called deep learning. The basic principle behind it is fairly simple and relays on how human brain operates. Look at this apple photo, and think for a moment: how do you know it is and apple? |
| 9 | What is deep learning p.2 | MICHAŁ | Bunch of pictures of apples, all kinds, green, red, full, half-eaten etc.. | The answer is simple. In your life you’ve seen thousands of similar photos. You learned that this properties that you see correspond to an apple and this is exactly how deep learning works. It sees thousands of examples of certain object or behavior, finds patterns and starts to recognize it. |
| 10 | How deep learning can be helpful | MICHAŁ |  | This technology, combined with various biofeedback creates great opportunities. Accurate diagnosis requires huge amount of data and thorough analysis, the more information we have, the longer it takes for a doctor to process it. Now imagine a computer analyzing patient based on hundreds of parameters in just few seconds. And the same technique may be applied to detect emotion states. |
| 11 | Is emotion recognition such an easy process?  //-----------------  Comparison of person with machine | YURA | Humans are not robots, we can only hear and see.  We lack <this preassure sensors twmp sensors etc>  We share one similarity tho.  We are able to learn on examples | But humans can only see and hear. And the devices that we use correspond to it with a proper functionality. If we a consider a smartphone, it has only camera and microphone as sensors. And in order to use biofeedback it has to have a “whole branch” of additional sensors which will ruin smartphones efficiency from the practical point of view. -2s  //-----------------  But humans can only see and hear. As you see the process of machine learning does not differs from regular human learning. But humans don’t measure our interlocutors pressure or heart rate in order to understand his emotions. However like we can only see and hear, the computers recognition process is also mainly based on those two sensors: cameras and microphones and can successfully function with only those. Talking about the difference, the computer process images in 2d model when our brain automatically transforms information received by an eye into a volume space/model(3d) |
| 12 | An article about Depression recognition p1 | YURA |  | To help us better understand the emotion recognition process let me refer to “Detecting Depression from Facial Actions and Vocal Prosody” article by University of Pittsburgh. In short the experiment compared clinical diagnosis of major depression  with automatically measured facial actions and vocal  prosody in patients undergoing treatment for depression.  -3s |
|  | An article about Depression recognition p2 |  |  | For measuring devices were used 4 synchronized cameras to observe different angles and body parts(neck, shoulders, face, gesture). The method of comparison was to provide a 10 minute interview with a participant and let the algorithm analyth if a person has MDD or not.  The result is astonishing, the algorithm successfully diagnosed MDD with 79-88% accuracy. |
| 13 | Conclusions and questions appeared from this article | YURA |  | So, according to this data using this technique looks promising. But there are still unresolved questions we have to ask:  1)What is efficiency of emotion detection?  2)Accuracy of this method and how to deal with errors?  3)How to state two emotions at the same time?  4)Time/Resource efficiency?  5)Can machine perform better than a human?// in all application areas?  +-1s |
| 14 | Problem statement | YURA |  | All of this questions and issues leaded us to the following/our problem statement: ”Inaccuracy in emotion detection process using unsophisticated device systems”(inny jest)  In other words it is a problem of efficiency and accuracy of emotion recognition without whole million of sensors attached to the body or placed in one room looking for at a specific point.//working only with specific parameters. +2s |
| 15 |  | YURA |  | Other problems related to our problem statement  -skutecznosc w wykrywaniu emocji inaccuracy in emotion detection  -autysyczni nie potrfaia i ten defetk jest tak duzy ze nawet z niewielka skuteczniscia mozna im pomoc people with autism have huge problem with emotion detection |
| 16 | Problem presentation | MARIUSZ |  | Now it’s finally the time to formulate the problem. After the whole research, we’ve made, we noticed, that all the methods of emotion recognition required ether many different recorders pand complicated algorithms or were quite inaccurate. There are not, however, any accurate mobile ways of detecting emotions. |
| 17 | Ishikawa | MARIUSZ |  | The idea was researched even further. We asked ourselves “why?”. Out of many possible conclusions we noticed a pretty interesting one. The mobile methods are not being proven.  We got to the idea of combining many of methods, which we’ve presented today. |
| 18 | Idea of a possible solution | MARIUSZ |  | Let’s put a person in front of a simple camera. By using FACS method and deep learning we can categorize their facial expression and stores them. And let’s prove those detected emotions using the biofeedback machines. As a result we get a mobile device with quite high accuracy. |
| 19 | JIM | MARIUSZ |  | We’ve spoted a couple of use of such a divice. As an example it might help the people ill on autism in everydays life. They do not recognise emotions. We consulted our thoughts with a specialist, a headmaster of the charity organisation JIM, who showed high interest in the idea. |
| 20 |  | MARIUSZ |  |  |

**Old:**

LoWe want to tell about:

-what we do, what we want to do

-all of our ideas

-research refs

-quotes

-target group

-problem statement

-problem

-journey through map of topics and ideas

-reasons behind we left depression

-reason why not all

-mail responses

-statistics data

-task distribution

-koło emocji

-

Reklamy są nieefektywne

Nie wywołują pożądanych emocji

|  |
| --- |
| hor/ver- inny leader every day |
|  |
| Research:  Biofeedback, emotions, machine learning, affective computing  Kolo emocji |
| Wykrywanie emocji okazało się narzędziem, nie rozwiązaniem. Jaki problem wykrywanie emocji może rozwiązać. Research depresja |
| Research depression studies  W trakcie researchu zdalismy sobie sprawe ze deprasja jest bardzo skomplikowanym schorzeniem i nie da się jej wykryć za pomocą samych emocji.  why we rejected depression |

Hello and welcome everyone

My name is xxx, and here is xxx and….

We are IT students. We differ a lot. Everyone shares different sharing passion to blahblah b;lah

This presentation is about our journey to find the problem according to the topic “Affective computing and emotion detection”.

Study that r= emotion recogn and human understanding into mach9ine prediction of hum behv, simulate hmn bhv.

We will start from our first thought

Problem statement:

“Lack of effective method of controlling emotions in advertisements.”

“Advertisement stir up/evoke inappriopriate emotions”

Problem:

“Wkurwiajace reklamy

“Ineffective advertisement”

And today we would like to talk about emotions.

Let us tell you a story about a four people

Let us tell you a story about how our team was build/problem we gonna solve

\*topic introduction\*

At the very beginning, when we met our supervisor and the topic

Hello and welcome everyone

My name is xxx, and here is xxx and….

We would like to shortly present the process of our research on the topic “affective computiting and emotion detection” which we were given due to the PBL program/subject.

*// nie wiem czy dobry to pomysl zeby wspomniec o PBL’u (podkreslony fragment)… co sadzicie?*

At the end we stated that: “there is lack effective method of controlling emotions in advertisements.” *// lub cos w tym guscie… poki co nie zastanawialem sie jak ladniej sformulowac to zdanie*

However, how actually did we come to such conclusion?

At first, our aproach was quite different. What may surprise you, is that, after the overall/general research considering: bio-feedback, deep learning and emotions themselves, we directed our course into detection of the depression/depression detection. *//podkreslonie zdanie zastanawiam sie czy nie wyjebac*

We noticed that depression is a huge problem in our society. The number of (ludzi chorujacych na depresje) rises every year. *// nie wiedzialem jak ladnie po angielsku to powiedziec*

*//i mozna pierdolnac tutaj jakis wykres na potwierdzenie*

It is mostly due to the lack of the early methode detection. We thought that people in general may not be aware of the emotions, they’re feeling, or at least not aware that these negative emotions might actually damage their mental health.

Reklama

1. As we got to the point, where the depression topic turned out to be too complicated, we all started to looking for some inspiration. We went through so many scientific journals from ISI Master Journal List, that we got tired enough to finally watch some YouTube videos. And that’s how we had found Allegro christmas advertisement which even made Ania cry. And right then, the new idea arose.
2. If you ever wondered why the advertisement is so memorable even if it is not really necessary to focus on it, it is probably because of two factors. The first one is the frequency of appearance, which usually evokes mixed feelings about the company that advertises. The second one is the strong emotion that is caused by the advertisement.
3. That’s why we decided to ask some experts what do they think about efficient use of emotions in case of advertising. Although the initial answers gave us hope for the accuracy of the problem found, in each subsequent e-mail we noticed further disadvantages of such a method. Main disadvantage was the ineffectiveness, which could occur while presenting sample ad to people from different religions.
4. //powolac zsie na osoby konkretne i podac arguumenty+cytat

WSZYSTKO SSIE LOL XD!

Slajd osoba

Kim jestesmy

Temat

Gdzie zastosowac rozpoznawnaie emocji

Problem metoda rozwiazania

Imienne idetyfikatory

1. prezentacja= czlonwkowie i funckje w zespole
2. Project opi description - opis tematyki
3. Problem definition

1 karty do gry autystyczne, rozpoznawanie emocji

Czy dzisiejsze tchnologie sa w stanie pomoc?

Deeplearningialgorytmy

Czy jestesmy w stanie im po,oc

Problem rozpoznawania emocji

Pytanie czy jestescie w stanie rozpoznac moje emocje?

A teraz mysl co z ludzmi z autyzmem

Opisujemy deep learning

Problem jak rozpoznac, czy niwiczesne technologie maja z ytm proble?

W jaki sposob sprawdzic skutecznosc wykrywania

beczka

Intro osoby

Topic presentation

Hej Glosno

Jaka emocja

Wykres wszystkich

Księciunio

Artificial methods of detecting emotions

Advanced biofeedback and processing it

using deep learning (what is it?)

Yura Jaka rybka bez piwka

(everything is cool, but...) but humans can only see and hear!

Speaking of emotion detection, in this processes humans are capable of distinguishing emotions only basing on two basic systems: eye and ear(audio and video). And even without information/knowledge about person blood pressure, heart rate we are capable of/can/are making accurate assumption about how and what that person feel.

Paper considering cameras and mics

But when it comes to machines the accuracy of such prediction is in direct ration to the number of detecting devices/device systems. Throw our research we’ve got acquainted with a different papers on the topic of emotion recognition and “”. One of them Detecting Depression from Facial Actions and Vocal Prosody by Jeffrey Cohn, gave us a decent understanding on how the whole prosidure goes and the problem “lying in it”. To keep it short in the experiment J.Cohn had 57 participants taken an interview with usage of 4 cameras and 2 microphones and afterwards the algorithm after analazing facial expressions, posture and voice changes stated if the partitioner had MDD or not.

Problem statement “If is it possible to accurately of the emotion recognition process using not soficitaded device systems”

ANd here where the problem comes, an average accuracy of this experiment is 64-88% , and such result was achieved with all the proper equipment. But can we trust such results for a daily bases for more simplified detecting devices.

Mariusz

Rypka

How We want to check (verify) artificial methods accuracy

Target groupApplication - why? Because

Possible application area

Podsumowanie całej chujwieczegopeczakuczajapierdolee i elo ziomal joł joł joł

Target group

//Skoro istnieje taka Potrzeba u ludzi to u ludzi z auytyzmem tym bardziej

Michał

Deep learning

//Weryfikacja

Mariusz

Konsultacja z ekspertem

Research

Depresja

Autyzm

Mail o ostatnim slajdzie

Bibilioteki

Metody rozpoznawania emocji

Weryfikacja

Pr. znakezienie biblioteki i wryfikacja skutecznosci

Intro

Problem

Topic

Application of topic

How, solution verification

Biomed neurofeedback weryfikacja

Problem ze zweryfikowaniem odczytanej emocji

Mariusz

Rypka???

Target groupApplication - why? Because

How We want to check (verify) artificial methods accuracy

Possible application area

Podsumowanie całej chujwieczegopeczakuczajapierdolee i elo ziomal joł joł joł

After we formulated the problem, we started to

Wykres emocji ->

Ania- Intro

1. Hello everybody! We are the “TEAM\_NAME” and today we want to show you our story about the problem we have found. But first, let’s introduce ourselves. My name is Ania, this is Mariusz, Michał and Yura. We are four different personalities, with different interests, and we were connected only through the field of study, which is Information Technology. But now, it has changed.
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//candide face model

1. Speaking of… HEY! Did anyone noticed any basic emotion in my last sentence? Are you able to name it? Well, according to the article about Basic Emotions there is a list, called “The Big Six”. To recognise emotion from facial expression we can use that list. It includes happiness, sadness, fear, surprise, anger, and disgust.
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NOWA WERSJA pis jołłłłłł

Porownanie do człowieka

Czy emocje mozemy rozpoznac lepiej niz inny czlowiek

Niektorzy ludzie maja to zaburzone

Jeden z wielu aspektow wykorzystywania emocji to pomoc dzieciom z autyzmem

Konsultowalismy sie z ekspertem i faktycznie jest to mocny problem

Problemy autystycznych- przytloczenie

Wspolczense urzadzenia moga pomoc, ale jest problem bo kupa roznych rzeczy

Deeplearning

Czy jest lepij od czlowieka interpretowac czy gorzej

Yura skuteznisc wykrywania emocji

Problem presentation

Kilka problemow

-skutecznosc w wykrywaniu emocji inaccuracy in emotion detection

-autysyczni nie potrfaia i ten defetk jest tak duzy ze nawet z niewielka skuteczniscia mozna im pomoc people with autism have huge problem with emotion detection

Telefon zbiera takie same bodzce jak czlowiek

Czy deeplearning jest w stanie skutecznie rozpoznac emocje.