



# Intelligent framework for utilizing facial emotions for medical purposes

Human Interaction Design for AI

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The problem



People lie in  
clinics

Making incorrect diagnoses

Making incorrect treatment

Missing important signs

Treating wrong medicine

Harm the patient

# User Study

## Main Cities:

- Innopolis
- Kazan

## Different areas:

- gynecology
- allergology
- therapy
- children's therapy
- sports medicine



# User Study

During the doctors' working process, they need:

- to leave only valid symptoms
- to assess the degree of pain
- understand how pain effect on the patient's standard of living

Sometimes they have problematic patients or patients who come for consultations without signs of illness, thinking up illnesses for themselves.

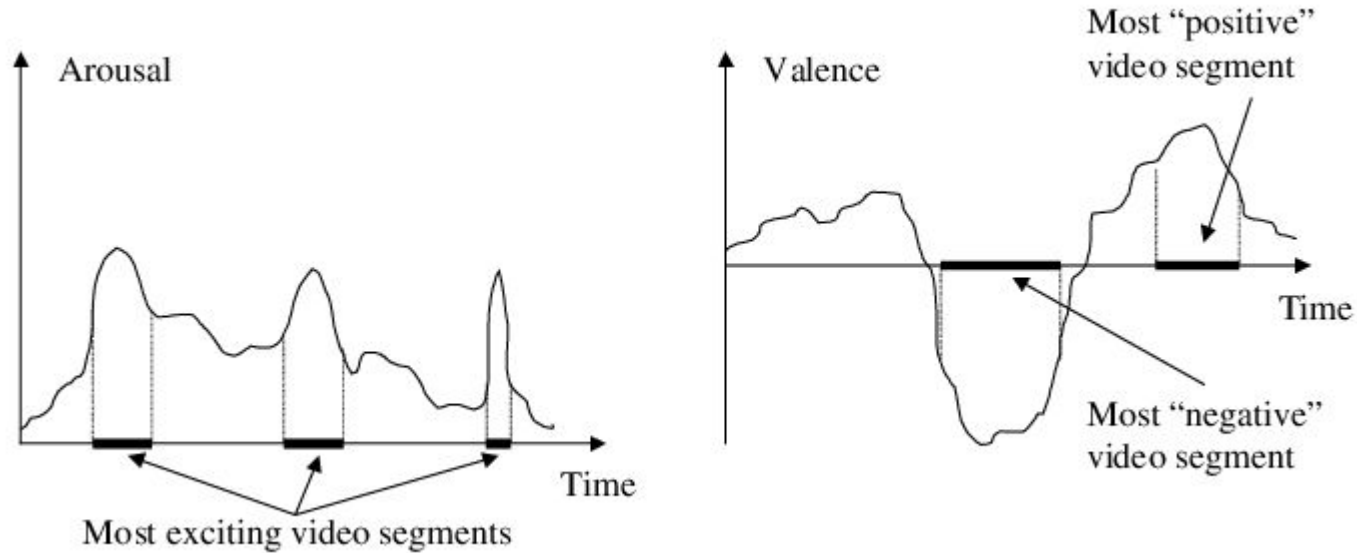
# Lie Detection Methods

- Trial by ordeal . Based on the belief that God would not let a righteous man suffer and injustice prevail
- Graphology
- Polygraph
- Observation of facial expressions
- Manually



Our solution

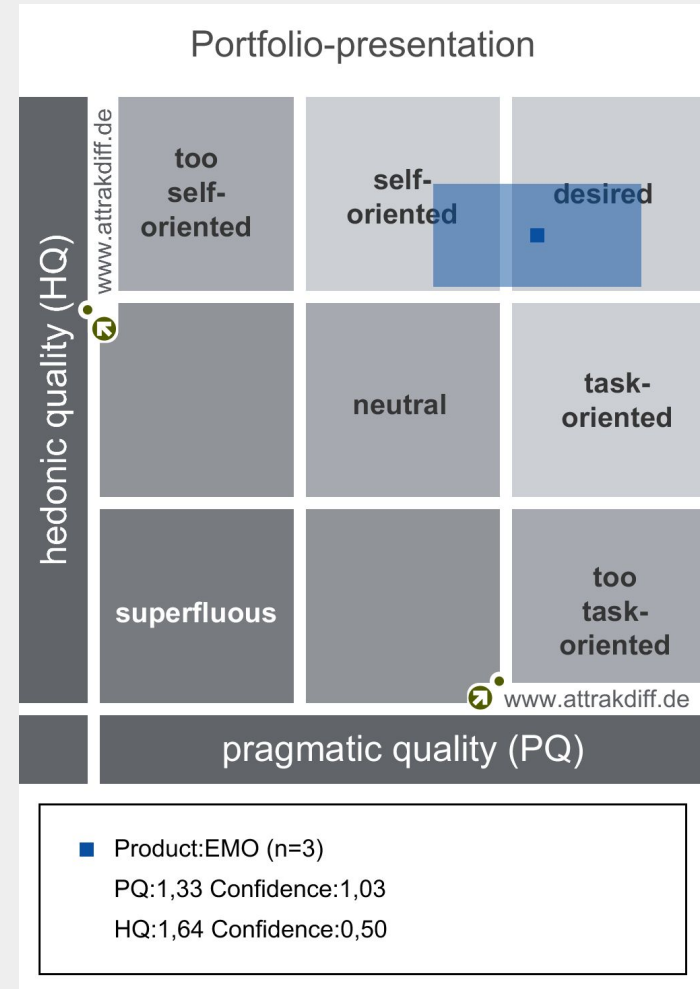
# Retrieving some emotion pattern



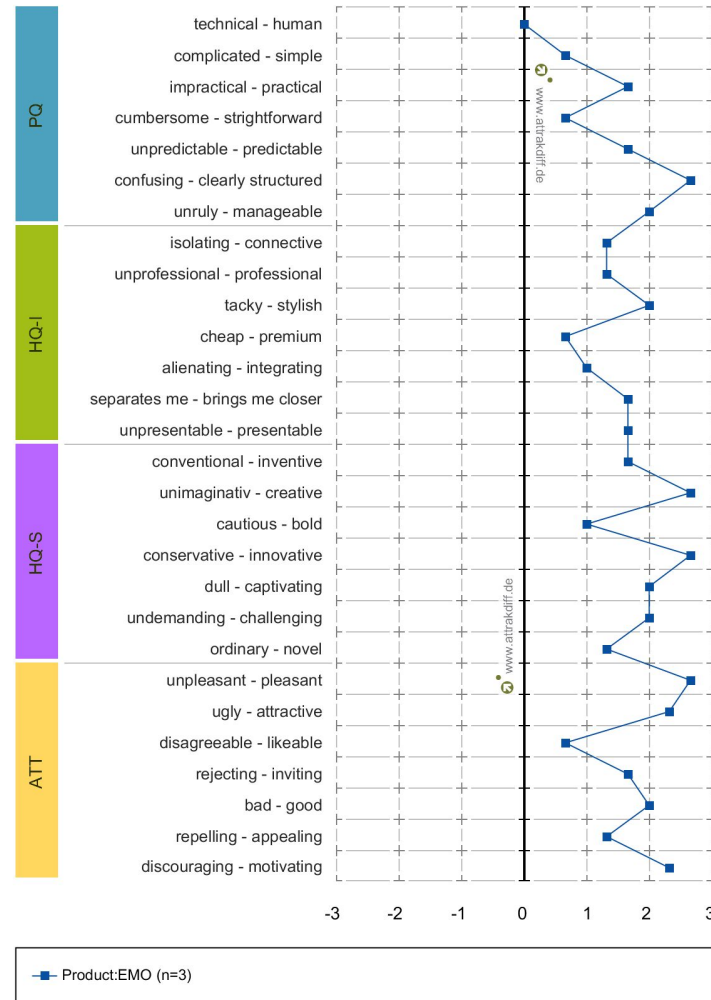


Demo

# Usability testing diagrams



# Description of word - pairs



# Conclusion

## “EmoAgent”:

- Neural networks for utilizing facial emotions
- Phone, tablet or surveillance camera
- Evaluates how positive and brightly expressed emotions

## Future works

- Train system to detect not only the lie
- Implement giving advices to take a rest (functionality for the users)
- Make a possibility to use any pluggable camera

Thank You!