XAI for Affective Computing Outline

Details

Seminar Start: **05.04.2022**
Seminar End: **12.07.2022**

Day: **Tuesday 10:00**
Room: **T2-226**

Office Hours: **Mondays 14:00 - 15:30**

Zoom Meeting: https://uni-bielefeld.zoom.us/j/97557637148?pwd=VVQ1N2toenVXUitiS3FtS2RZdGxWUT09

Description

Affective computing deals systems that process or simulate human affect, including emotions, through the analysis of human behavior. Increasingly applications for the detection of affect and emotions are moving toward the use of deep learning and other black box models. Due to the strongly personal nature of behavior analysis and significant variations in emotional expression between individuals, models should be made transparent and explainable. In this seminar, we will learn about state-of-the-art approaches and associated challenges for explainable affective computing. Since affective computing typical deals with multimodal data, this seminar will look at explainability methods for visual, audio, and text data. Additionally, we will explore emerging research in explainability for multimodal systems. This seminar will include both theoretical and practical methods. Therefore, you will be expected to have a working knowledge of implementing and working with deep learning models in TensorFlow and Keras.

Structure

Session	Date	Title	Type
1.	05.04	Introduction to Course	Lecture
2.	12.04	Explanations / Intro to XAI	Lecture
3.	19.04	Affective Computing	Lecture
4.	26.04	Simplification Methods	Presentations
5.	03.05	Feature Attribution I	Presentations
6.	10.05	Feature Attribution II	Presentations

Session	Date	Title	Type
7.	17.05	1st Notebook	Practical
8.	24.05	Counterfactuals	Presentations
9.	31.05	User Centered Explainability	Presentations
10.	07.06	Explainable Affective Computing I	Presentations
11.	14.06	Explainable Affective Computing II	Presentations
12.	21.06	2nd Notebook	Practical
13.	28.06	Evaluating Explainability	Lecture / Discussion
14.	05.07	Summary	Discussion
15	12.07	Feedback	Discussion

Assignments

Assignment	Start Date	Due Date	Weight
Presentation	3 weeks before	depends on session	Pass/Fail
Jupyter Notebook 1	02.05	15.05	Pass/Fail
Jupyter Notebook 2	06.06	19.06	Pass/Fail
XAI Design Report	15.06	30.07	Graded