

**Fact sheet**

**Explainable Computer Vision Workshop**

and

**Job Candidate Screening Coopetition**

**Interpretable Prediction using Hand-picked Features**

Feb 17th, 2017

**1. Team details**

1.1 **Team name:** ROCHCI

1.2 **Team leader name:** Md. Iftekhar Tanveer

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1.4 **Rest of the team members:**

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1.5 **Team website URL (if any):** http://cs.rochester.edu/hci/

1.6 **Affiliation:** University of Rochester

**2. Contribution details**

2.1 **Title of the contribution:** Interpretable Prediction using Hand-picked Features

2.2 Final score:

2.3 General method description:

* **Overview of the proposed approach:**

We use hand-tuned features and simple boosting techniques for building interpretable prediction models. The facial features were collected using facial tracker [1], SHORE face analysis tool [2], prosody features were collected using PRAAT [3], and some other manually decided features from the transcripts. We used gradient boosting regression for the prediction model.

* The proposed method uses / takes advantage of personality traits? No
* Coopetition: can your code be shared among other participants for the second stage of the challenge? Yes
* Total method complexity: Unknown
* Which pre-trained or external methods/models have been used (for any stage, if any):

All the features were extracted using pre-trained and established algorithms (described in overviews)

* Which additional data has been used in addition to the provided ChaLearn training and validation data (at any stage, if any): None. The necessary information was extracted from the provided dataset
* Qualitative advantages of the proposed solution: Interpretable models
* Results of the comparison to other approaches (if any): None
* Novelty degree of the solution and if is has been previously published: None

2.4 GitHub URL for the project: https://github.com/ROC-HCI/chalearn\_coopetition\_2017

2.5 References: See later

2.6 Representative image / diagram of the method: N/A

2.7 Describe data preprocessing techniques applied: N/A

**3. Visual Analysis**

3.1 Features / Data representation: SHORE and facial features

3.2 Dimensionality reduction: None

3.3 Model: N/A

3.4 Learning strategy: Gradient Boosting Regression

3.5 Other techniques: N/A

3.6 Method complexity: Unknown

**4 Personality Trait recognition from Visual data**

4.1 Features / Data representation: Discussed above

4.2 Dimensionality reduction: None

4.3 Model: N/A

4.4 Learning strategy: Gradient Boosting Regression

4.5 Other techniques: N/A

4.6 Method complexity: Unknown

**5 Personality Trait recognition from Audio data**

5.1 Features / Data representation: Pitch, Intensity

5.2 Dimensionality reduction: None

5.3 Model: N/A

5.4 Learning strategy: Gradient Boosting Regression

5.5 Other techniques: N/A

5.6 Method complexity: Unknown

**6 Personality Trait recognition from ASR/text data**

6.1 Features / Data representation: Hand picked

6.2 Dimensionality reduction: None

6.3 Model: N/A

6.4 Learning strategy: Gradient Boosting Regression

6.5 Other techniques: N/A

6.6 Method complexity: Unknown

**7 Multimodal Personality Trait recognition**

7.1 Data Fusion Strategies: Feature-level

**8 Other details**

8.1 Language and implementation details (including platform, memory, parallelization requirements): Python, heterogeneous systems

8.2 Human effort required for implementation, training and validation?: Yes

8.3 Training/testing expended time?: Unrecorded

8.4 General comments and impressions of the challenge? what do you expect from a new challenge in face and looking at people analysis? None

**9 References**

[1] https://github.com/go2chayan/FacialAction

[2] https://www.iis.fraunhofer.de/en/ff/bsy/tech/bildanalyse/shore-gesichtsdetektion.html

[3] http://www.fon.hum.uva.nl/praat/