

# ECIR 2019, Cologne, Germany

## CLEF Labs

Early risk prediction on the Internet

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**Objective** Explore issues of evaluation **methodology**, effectiveness **metrics** and other **processes** related to the creation of test **collections** for **early risk detection**

## Early Risk Prediction

process of **sequential evidence accumulation** where **alerts** are made when there is enough evidence about a certain type of **risk**

eRisk 2019: 2+1 tasks

**T1**

## **early detection of anorexia**

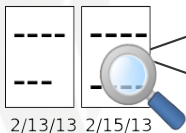
based on eRisk 2018 data (training) +  
new data collected for 2019 (test)

2019: iterative release of user writings (REST server)

detect **early traces** of anorexia

for each subject **sequentially process** pieces of evidence...

Jane Doe's writings  
(posts or comments)



alert (possible case of anorexia)

no alert

a REST server iteratively gives user writings and waits for responses

## T2

### self-harm

new data collected for 2019

**no training stage**

(promote search-based methods)

**positive group:** (done self-harm)

history of his/her writings

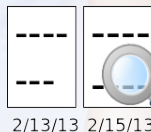
before entering into the self-harm community

iterative release of user writings (REST server)

detect **early traces** of self-harm

for each subject **sequentially process** pieces of evidence...

Jane Doe's writings  
(posts or comments)



→ alert (possible case of self-harm)

→ no alert

a REST server iteratively gives user writings and waits for responses

## T3

### depression-level estimation

**automatically fill a standard depression questionnaire**  
based on user's writings





&lt;Roch

Beck Depression  
Inventory

Baseline

V 0477

CRTN: \_\_\_\_\_ CRF number: \_\_\_\_\_ Page 14 patient initials: \_\_\_\_\_



Name: \_\_\_\_\_ Marital Status: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Occupation: \_\_\_\_\_ Education: \_\_\_\_\_

**Instructions:** This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. Circle *the* number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

**1. Sadness**

- 0 I do not feel sad.
- 1 I feel sad much of the time.
- 2 I am sad all the time.
- 3 I am so sad or unhappy that I can't stand it.

**2. Pessimism**

- 0 I am not discouraged about my future.
- 1 I feel more discouraged about my future than I used to be.
- 2 I do not expect things to work out for me.
- 3 I feel my future is hopeless and will only get worse.

**6. Punishment Feelings**

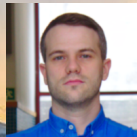
- 0 I don't feel I am being punished.
- 1 I feel I may be punished.
- 2 I expect to be punished.
- 3 I feel I am being punished.

**7. Self-Dislike**

- 0 I feel the same about myself as ever.
- 1 I have lost confidence in myself.
- 2 I am disappointed in myself.
- 3 I dislike myself.

**8. Self-Criticalness**

See you at Lugano!



 @earlyrisk

<https://erisk.irlab.org/>