Early detection technologies can be employed in different areas, particularly those related to health and safety. For instance, early alerts could be sent when a predator starts interacting with a child for sexual purposes, or when a potential offender starts publishing antisocial threats on a blog, forum or social network. Our main goal is to foster a new interdisciplinary research area that would be potentially applicable to a wide variety of situations and to many different personal profiles.

**Early Alert Tasks**

T1 and T2 objective:

- Detect early traces of depression/anorexia for each subject, sequentially processing pieces of evidences (writing history).

At each sequence the teams have to decide for each subject:

- Possible case of gambling addiction/depression (alert).
- No gambling addiction/depression.
- Estimated score of gambling addiction/depression

The sooner the alert is emitted the better.

- **T1 pathological gambling** training (eRisk 2021 collection) and test data (new data) with iterative release of user writings through a REST server.
- **T2 depression** training (eRisk 2017 & 2018 collections) and test data (new data) with iterative release of user writings through a REST server.

**T3: Depression-level estimation**

T3 eating disorder severity estimation systems have to automatically fill the EDE-Q questionnaire based on user’s writings.

For each user, the participants will receive a history of postings and the systems will have to fill the questionnaire (based on the evidence found in the history of postings).

**Evaluation** will be based on:

- overlapping between the questionnaire filled by the user and the questionnaire filled by the system.
- absolute difference between the levels of eating disorder obtained from both questionnaires.

**Datasets**

Our collections are composed of chronologically sorted posts from a set of Social Media users.

- Two categories: subjects with and without gambling addiction/depression (with extraction method Coppersmith et al. ACL 2014).
- Every user is represented by a sequence of writings in chronological order.
- Large history of writings, often several years of text.
- Explicit mentions to diagnosis were removed.

For the eating disorder scale task, we provided with the whole user writing history of users (both diagnosed and not diagnosed) and the Eating Disorder Examination Questionnaire (EDE-Q).

**Early Alert Evaluation**

The task objective is to detect early risk of depression/anorexia, the evaluation metric should not only take into account the accuracy of the decisions but also the delay.

**ERDE:** Early Risk Detection Error (Losada & Crestani CLEF 2016) and its variant ERDE%:

\[
\text{ERDE}\_\text{O}(d,k) = \frac{c_{fp}}{c_{tn}} \cdot \text{lg}(k) + \frac{c_{fn}}{c_{tp}} 
\]

Penalty to late detections:

We also use ranking based metrics such as:

- MAP
- NDCG