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Call for Challenges for NLP-Hackathon

Texts can be analyzed and evaluated for linguistic and content information using Natural Language Processing (NLP) methods. In order to get new perspectives on the different NLP problems and to get to know new ways of working, the University of Bern is organizing an NLP Hackathon on March 24 and 25, 2021. Own challenges can be submitted now.

Successful NLP applications are characterized by the use of machine learning methods that are based on language models on the one hand and have sufficient training material on the other. The challenges are accordingly versatile and concern different digital applications from textual processing to the use of deep learning algorithms and forms of visualization. During the first NLP Hackathon at the University of Bern on **Wednesday and Thursday, March 24 and 25, 2021, participants** will solve concrete NLP challenges and then present them to each other. In advance, NLP challenges can be submitted by internal or external university departments, for which the participants will then register.

Objectives

A Hackathon brings together people who want to develop a creative, technical solution to specific problems (challenges) in a short period of time. The overall goal of the NLP Hackathon is to build up knowledge, to exchange experiences and to improve the networking of people interested in NLP. Furthermore, the possibilities and limits of today's NLP technologies are to be tested and new tools are to be experimented with by working on concrete challenges. In addition, the submitting organizations should benefit from possible solutions for their challenges and, if interested, continue the cooperation with the participants.

Consideration COVID-19

Normally, hackathons are held at one venue where everyone can meet, exchange ideas, and also have food. However, in the current pandemic situation, it is difficult to organize larger events on site, so the NLP Hackathon in March 2021 will be decentralized. Participating teams will work on the selected challenge in their home offices or in their respective work environments. At the beginning of the hackathon, there will be a short virtual introduction of all teams and selected challenges, and at the end of the day, the teams will present their results virtually.

Challenges

We are looking for NLP-Challenges for example on the following topics:

- Specific forms of recognition (Part-of-Speech, Named Entity Recognition etc.)
- Information Extraction and Open Knowledge Graph Canonicalization
- Relationship Extraction
- Technical languages
- Historical language forms
- etc.

An NLP Challenge can be either A) competitive or B) creative in nature:

A) In the ***competitive challenges,*** the problem and the data to be analyzed must be specified exactly so that the results can be measured and compared with each other. The goal is for the participating teams to try to develop the best possible solution for the NLP challenge and thus win the challenge. For this purpose, a corresponding competition must be created on Kaggle (www.kaggle.com) and submitted for the hackathon.
Example: "A training data set of German-language Swiss federal court decisions annotated with named entities is available. Achieve the highest possible F1 score on the test set when predicting named entities."

B) In the ***creative challenges,*** NLP-related problems can be submitted whose results cannot be easily quantified (e.g. open questions, data visualization, creative handling of NLP outputs, etc.). Nevertheless, a clear description of the task and the expected results is needed in order to focus the work.
Example: "A Knowledge Graph based on a Swiss court decision is available. Reduce it to the most essential facts and present your findings in an appealing way."
Alternative: "Visualize a language model with the goal of finding individual tokens or identifying word clusters and making them interpretable."

For both types of NLP Challenges, the respective Kaggle links or description of the creative challenges can be submitted via email to dh@wbkolleg.unibe.ch by Monday, February 22, 2021. If you have any questions about the challenges, the process, the effort, etc., you can contact the people below.

Procedure

- Mid-January 2021: Publication of the Call for NLP Challenges.
- February 22, 2021: Submission deadline for competitive and creative challenges
- March 1, 2021: Publication of the submitted challenges
- March 15, 2021: Deadline for participating teams to register.
- March 24 and 25, 2021: Implementation of the NLP Hackathon

Organizers

The event is a continuation of the [NLP workshop in August 2020](#) and is organized by the Digital Humanities of the Faculty of Humanities, the Faculty of Science's Competence Network Digitalization (CND), the Digital Sustainability Research Center of the Institute of Computer Science and the Science IT Support Unit of the University of Bern. It is part of the [virtual events of the Digital Humanities in the German-speaking area 2021](#).

Note for doctoral students

PhD students of the Graduate School of the Arts and Humanities (GSAH) of the University of Bern receive 1 ECTS for the active participation in this NLP Hackathon.

Contact persons

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