

Semester Project: GUI for Biomedical Relationships Extraction from Literature

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Abstract

The main goal of this project is to implement a graphical interface (GUI) to display the relevant relationships extracted from scientific articles (the extractor already exists) and collect user feedback.

1 Description

1.1 Context

One goal of the BlueBrain NLP team is to parse scientific articles and extract relevant relationships between biomedical entities. For example, we would like to find the relevant papers stating that the "*AMPA receptor*" "*binds to*" "*PDZ domains*".

The processing pipeline to extract these relationships is currently being implemented and improved upon. The next important step is its design and the implementation of a graphical interface (GUI) to display relevant relationships and collect user (=researchers) feedback.

The proposed GUI (see figure `TODO`) should allow users to enter their search terms and display them (here, in orange: "*NMDA*" and "*AMPA*"), along with other relevant entities and their relationship. A system of filters should allow to display only relevant documents (here, document describing post-synaptic relationships, with experiments on rats aged 13 to 18 days)

1.2 Tasks

1. review and analyze implemented system and results

2. improve mock-up and create UI prototypes
3. iteratively build GUI functionalities

2 Environment

This semester project is co-supervised between IC-LIA and SV-BlueBrain Project. Material and working environment will be provided at BBP (QIJ 3).

3 Required Skills

The target student is a typical Computer or Communication Science Bachelor or Master Student.

No specific skills are required but a willing interest in the topic and the standard CS student development skills.