

Natural language processing in toxicology and health research

Internship description

Scientific literature contains a wealth of unstructured data on the health effects of herbs and compounds, which could be used in statistical models to make predictions; for example as a replacement for animal testing. In order to structure this data, natural language processing (NLP) can be used.

For this internship project, you will use NLP to create language models with named entity recognition and/or entity linking, in order to extract ontology terms and other relevant biological entities from scientific literature and company reports about the toxic and/or health-beneficial effects of herbs and compounds.

Optionally, you can improve other parts of the pipeline. Possible topics include: negation and/or abbreviation detection, causality and/or topic modeling, and text mining.

Project goals and expected outcome(s) or product(s)

- NLP model and/or text mining pipeline

Expected duration

5-12 months, from March 2024 at the earliest.

Other relevant matters

- Programming languages used: Python, R, Git
- Previous knowledge/experience on NLP is preferred but not required.
- The internship goals and duration are flexible and depend on your specific study requirements.

About Vivaltes

Vivaltes (www.vivaltes.com) is a small biotechnology company with 12 employees, offering both data science solutions as well as *C. elegans* laboratory research. Vivaltes is committed to reducing and preventing animal testing. The atmosphere in the company is fun and casual, and always science-driven.

We are located at 5 minutes walking distance from Bunnik train station and at 10 minutes cycling from the Utrecht Science Park.

The working language at the company is English, but meetings with the daily supervisor can be in Dutch.

Interested?

Bachelor and Master students at (applied) universities currently studying data science, bioinformatics, statistics, or other relevant fields can apply.

Please send your motivation letter and CV to Dr. Eefje S. Poppelaars (es.poppelaars@vivaltes.com).

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