

AILANI COVID-19 - literature mining and artificial intelligence based question answering – a scientific assistant for COVID-19 research

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AILANI is a novel and unique scientific assistant that answers natural language questions such as “How to prevent cytokine storms with COVID-19 infection?” with artificial intelligence (AI) assessed relevant responses as well as a graphical summarization of all responses that enables interactive ontology based exploration and refinement.

The system is driven by an enterprise technology that combines semantic modeling, ontologies, linguistics and AI algorithms. The semantic model allows for mapping and integration of knowledge and data, and enables specific processing pipelines for literature mining.

The COVID-19 specific AILANI integrates a variety of structured resources and provides real-time semantic analysis of literature and breaking news with COVID-19 specific information. As part of the COVID-19 Disease Map Collaboration we automatically mine the COVID-19 literature for information on biomedical concepts such as diseases, symptoms, genes, drugs or cell types which are mapped into an overall knowledge network including structured data and ontologies. The user interface is publically available without registration and, in addition to the question answering system, provides keyword, boolean and chemical structure searches. With the optional registration additional features such as application programming interfaces for batch processing become available as well as personlisation options like a search history, favourite searches, documents, chemical structures and subscription to news feeds.

References and useful links

<https://ailani.ai>

Bauch A, Pellet J, Schleicher T, Yu X, Gelemanovic A, Cristella C, et al. Informing epidemic (research) responses in a timely fashion by knowledge management - a Zika virus use case. bioRxiv. 2020; 2020.04.17.044743. doi:10.1101/2020.04.17.044743