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# **CLARINET Documentation**

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CLARINET (CLARIfying NETworks) is a novel tool for rapid model assembly by automatically extending dynamic network models with the information published in literature. This facilitates information reuse and data reproducibility and replaces hundreds or thousands of manual experiments, thereby reducing the time needed for the advancement of knowledge.



## CLARINET OBJECTIVES

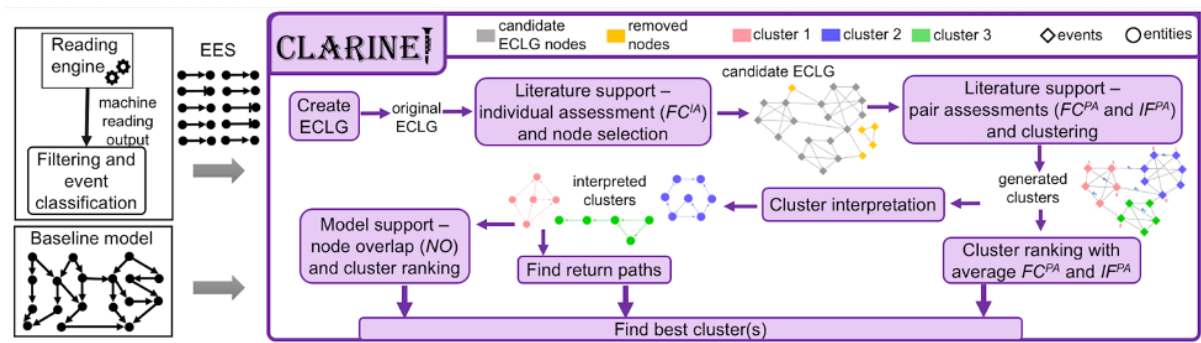
1. Utilizing the knowledge published in literature and suggests model extensions.
2. Studying events extracted from literature as a collaboration graph, including several metrics that rely on the event occurrence and co-occurrence frequency in literature.
3. Allowing users to explore different selection criteria when automatically finding best extensions for their models.





## CLARINET ARCHITECTURE

(Left) CLARINET inputs: Extracted Event Set (EES) and Baseline model. (Right) Flow diagram of the CLARINET processing steps and outputs.





## **DEPENDENCIES**

Python libraries: pandas, numpy, network, math, pickle, community, matplotlib.pyplot.



## **APPLICATIONS**

The primary application area of CLARINET is dynamic and causal network models.



**FUNDING**

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## 5.1 CLARINET functions (`CLARINET.runClarinet`)

This page provides a detailed documentation of the CLARINET functions.

### 5.1.1 Functions

## 5.2 Legal

The MIT License (MIT)

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## 5.3 License and funding

This work is funded by DARPA award W911NF-17-1-0135

## 5.4 Citation

To use and cite the CLARINET tool, please use the following:

Yasmine Ahmed, Cheryl Telmer, Natasa Miskov-Zivanov. "CLARINET: Efficient learning of dynamic network models from literature," Accepted at Bioinformatics Advances, 2021.