ACCORDION

version 1

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Contents

Welcome to ACCORDION's documentation!

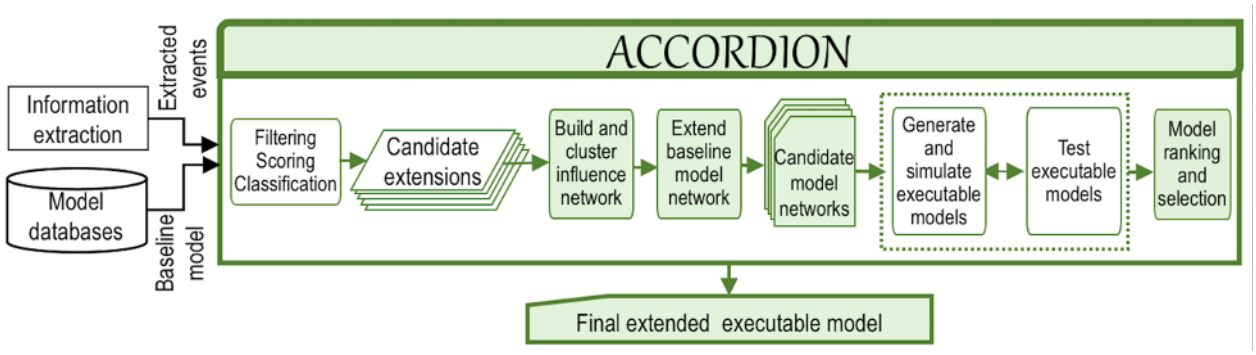
ACCORDION (ACCelerating and Optimizing model RecommenDatIONs) is novel tool and methodology for rapid model assembly by automatically extending dynamic network models with the information published in literature. This facilitates information reuse and data reproducibility and replaces hundreds or thousands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

ACCORDION objectives

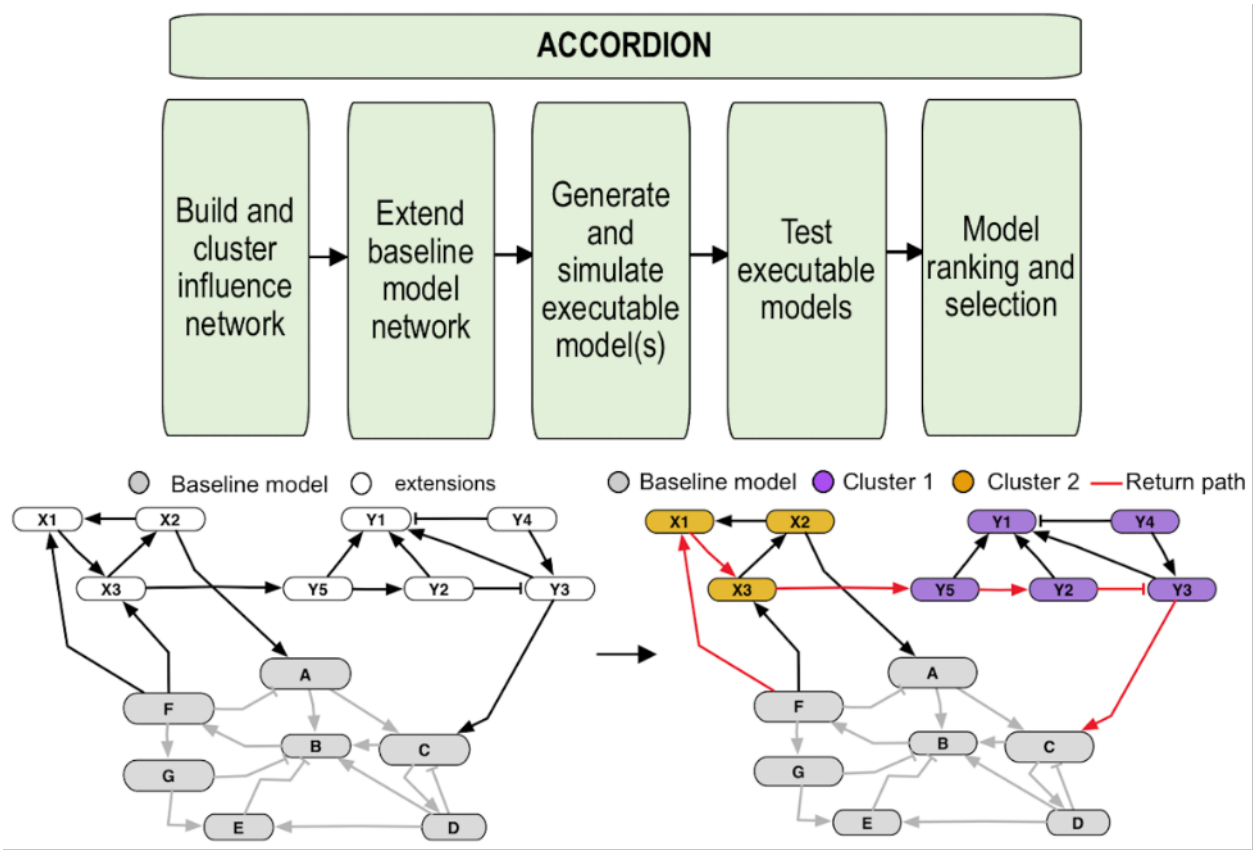
1. Extending dynamic network models by combining clustering and path finding with model testing on a set of predefined desired system properties
2. Evaluating the effect of published literature and machine reading when automatically reconstructing an existing model

ACCORDION architecture

Flow diagram of the ACCORDION processing steps and outputs.



ACCORDION conceptual overview



Dependencies

Install markov clustering

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

Applications

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

Funding

ACCORDION was partially supported by the AIMCancer DARPA award (W911NF-17-1-0135).

ACCORDION general functions (`ACCORDION.runAccordion`)

This page provides a detailed documentation of ACCORDION general functions.

Functions

ACCORDION specific functions (`ACCORDION.markovCluster`)

This page provides a detailed documentation of ACCORDION specific functions.

Functions

License and funding

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Citation

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

Yasmine Ahmed, Cheryl Telmer, Natasa Miskov-Zivanov, “ACCORDION: Clustering and Selecting Relevant Data for Guided Network Extension and Query Answering,” arXiv, February 2020.