



Student project / BA-/MA-Thesis

# Extending a Probabilistic Reasoning and Decision-Making Framework

## Topic

Bayesian Networks offer a nice and intuitive framework for probabilistic reasoning and their graphical nature can often be interpreted quite nicely. Our own inference implementation PRIMO (<https://gitlab.uni-bielefeld.de/scs/PRIMO>) already allows the use of different kinds of networks as well as inference methods, however many more scenarios are possible.

## Potential topics

- Add support for various kinds of continuous distributions.
- Extend upon existing learn or inference algorithms.
- Add support for different kinds of networks (e.g. Conditional Random Fields etc)

## Recommended skills

- Decent knowledge of Bayesian Networks and probabilistic inference
- Proficient knowledge in probability theory

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