

Bachelor/Master Thesis:

Ontology of Gaussian Mixture Inference

Topic

Gaussian mixtures are statistical models that represent a distribution as a combination of multiple Gaussian distributions, each characterized by its own mean and variance. This approach allows for the modeling of complex datasets that exhibit multimodal characteristics, where data points cluster around different centers. The ontology of Gaussian mixtures is intriguing because it provides a flexible framework for capturing intricate relationships within data. They are widely used in various fields, including machine learning, computer vision, and bioinformatics, facilitating tasks such as clustering, density estimation, and anomaly detection. Their ability to model uncertainty makes them powerful tools for data analysis and inference.

Path

Our main goal is to develop and implement a core ontology for modelling quantitative attributes using Gaussian mixture.

Prerequisite

There are no hard constraints but the more programming and math you know the more you can have fun while doing the project.

What I offer

- A teammate/supervisor who is actually present.
- Possibility to be a co-author in a research level publication.
- A BSc/MSc thesis project that will be used in production level software for an enterprise level project.
- I can probably provide you with an office.
- Nice private IT infrastructure to implement whatever wild ideas you have in mind.

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