MASTER'S THESIS PRESENTATION

Res-VAE: A Highly Scalable Causal Network Discovery Method

WHEN May 4, 2022 2:00 PM



WHERE Zoom Meeting

For ZOOM presentations, details will be provided in an email announcement for this seminar.

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Learning causal relations or causal network discovery is essential in many research areas. Conventional heuristic methods by search the Bayesian network and optimize the score function rely heavily on the particular network topology and handcrafted constraints. Existing deep learning-based methods, such as DAG-NOTEARS, DAG-GNN, and GraN-DAG, can not generalized to new input. To overcome these problems, we propose Res-VAE model, which uses a pre-trained D-VAE model to map DAGs to latent vector space and use ResNet to learn from observational data to latent vector. Res-VAE shows the great potential on both synthetic and real data, recovering unseen causal networks with limited sample size.



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