S5 Text: AUPR score depending on ensemble size for different case-studies with and without applying model reduction

Data-driven reverse engineering of signaling pathways using ensembles of dynamic models

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January 17, 2017

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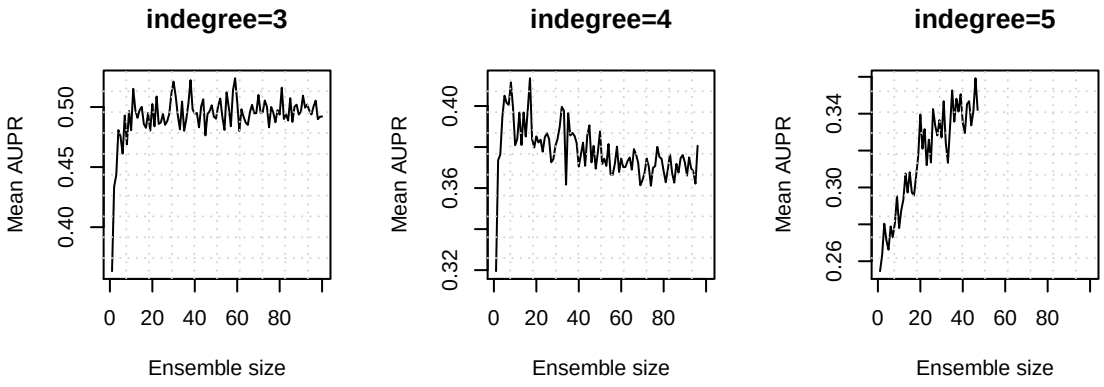

Figure 1:
AUPR score depending on ensemble size without model reduction for case study 1a (MAPKp). Descrition.This curve was computed by bootstrapping multiple $n_{\mathcal{M}}$ models from the available models, *i.e.* we sampled multiple realizations of the ensemble network for the same ensemble size and computed the average value.

Figure 2:
AUPR score depending on ensemble size with model reduction for case study 1a (MAPKp). Descrition.This curve was computed by bootstrapping multiple $n_{\mathcal{M}}$ models from the available models, *i.e.* we sampled multiple realizations of the ensemble network for the same ensemble size and computed the average value.

1.2 Case study 1b (MAPKf)

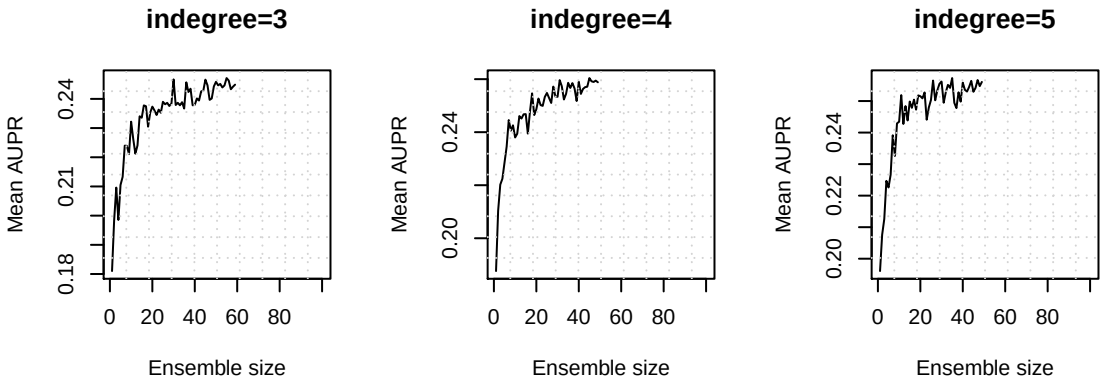

Figure 3:
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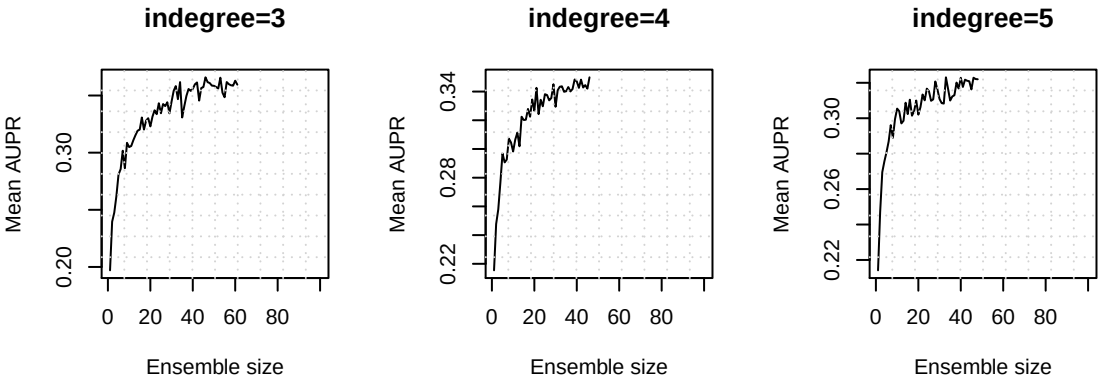

Figure 4:
AUPR score depending on ensemble size with model reduction for case study 1b (MAPKf). Descrition.This curve was computed by bootstrapping multiple $n_{\mathcal{M}}$ models from the available models, *i.e.* we sampled multiple realizations of the ensemble network for the same ensemble size and computed the average value.

1.3 Case study 2 (SSP)

Figure 5:
AUPR score depending on ensemble size without model reduction for case study 2 (SSP). Descrition.This curve was computed by bootstrapping multiple $n_{\mathcal{M}}$ models from the available models, *i.e.* we sampled multiple realizations of the ensemble network for the same ensemble size and computed the average value.

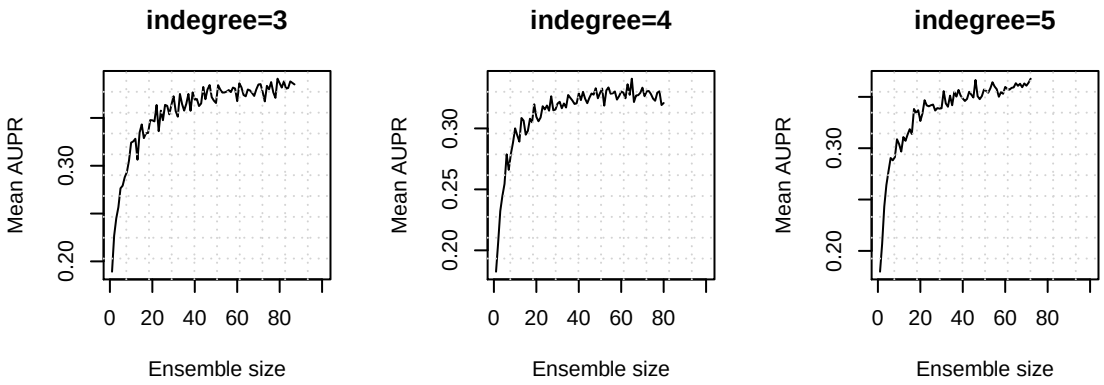

Figure 6:
AUPR score depending on ensemble size with model reduction for case study 2 (SSP). Descrition.This curve was computed by bootstrapping multiple $n_{\mathcal{M}}$ models from the available models, *i.e.* we sampled multiple realizations of the ensemble network for the same ensemble size and computed the average value.

1.4 Case study 3 (DREAMiS)

Figure 7:
AUPR score depending on ensemble size without model reduction for case study 3 (DREAMiS). Description.This curve was computed by bootstrapping multiple $n_{\mathcal{M}}$ models from the available models, *i.e.* we sampled multiple realizations of the ensemble network for the same ensemble size and computed the average value.

Figure 8:
AUPR score depending on ensemble size without model reduction for case study 3 (DREAMiS). Description.This curve was computed by bootstrapping multiple $n_{\mathcal{M}}$ models from the available models, *i.e.* we sampled multiple realizations of the ensemble network for the same ensemble size and computed the average value.