Approximate Bayesian Network Formulation for the Rapid Loss Assessment of Real-World Infrastructure Systems

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Highlights

- The proposed Bayesian Network can treat large systems with complex performance metrics
- A random forest algorithm is adopted for a stable selection of important components
- The influence of evidenced components is enhanced by a recursive building algorithm
- A similarity measure ensures the robustness of the off-line Monte Carlo simulation
- The method is applied to a real-world road network, with a sensitivity analysis