

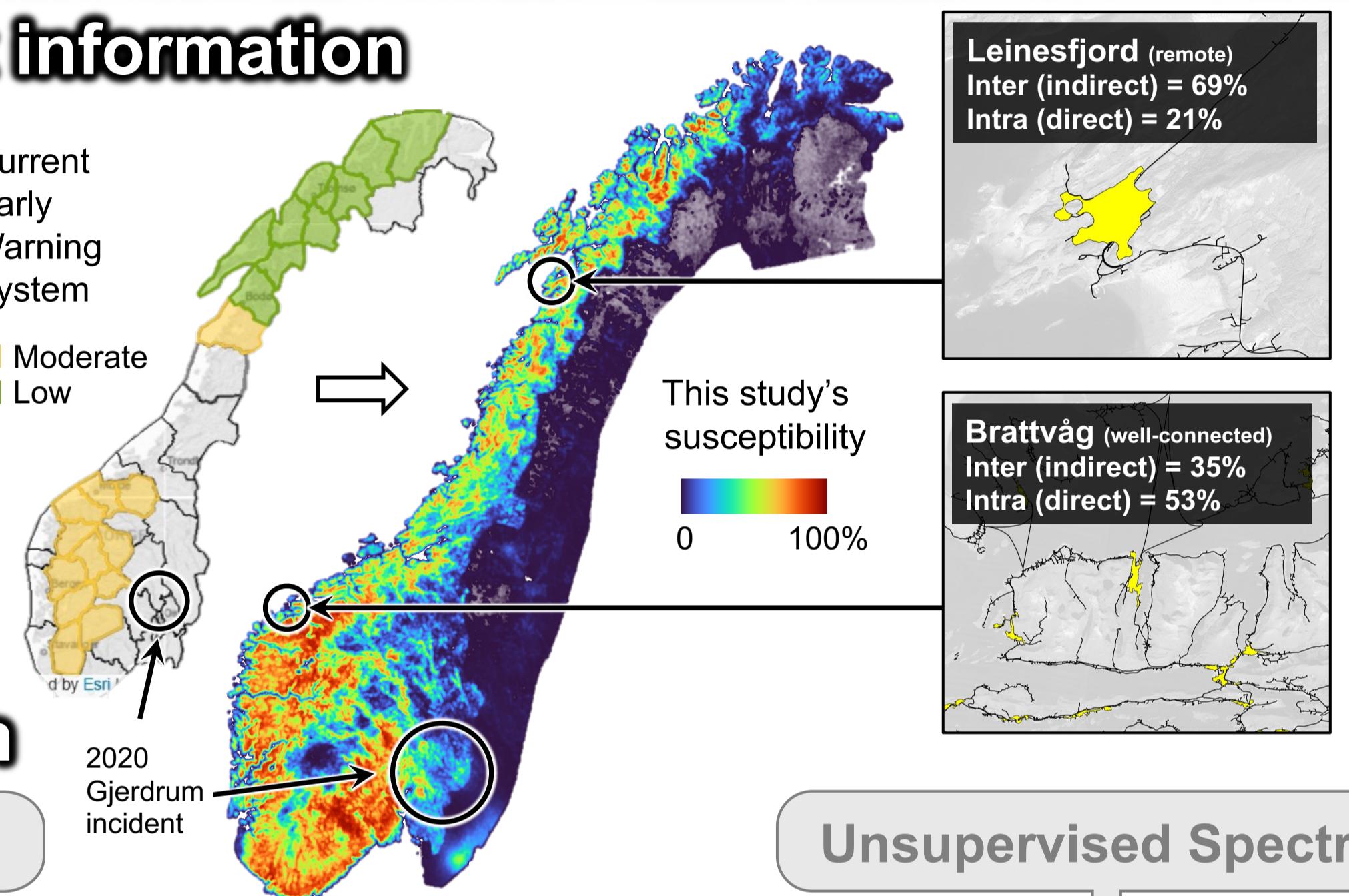
The Intergraph Approach for Near-real-time Large-Scale Susceptibility Mapping and Settlement-Road Exposure Assessment: The Case of Norwegian Mass Movements

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PROBLEM: The need for climate risk information

- Increasing rainfall trend amidst climate change, triggering **more** mass movements
- Highly **conservative** estimates using the current early warning system
- Limited** refined information, potentially leading to poor risk perception
- Complex** region-specific characteristics



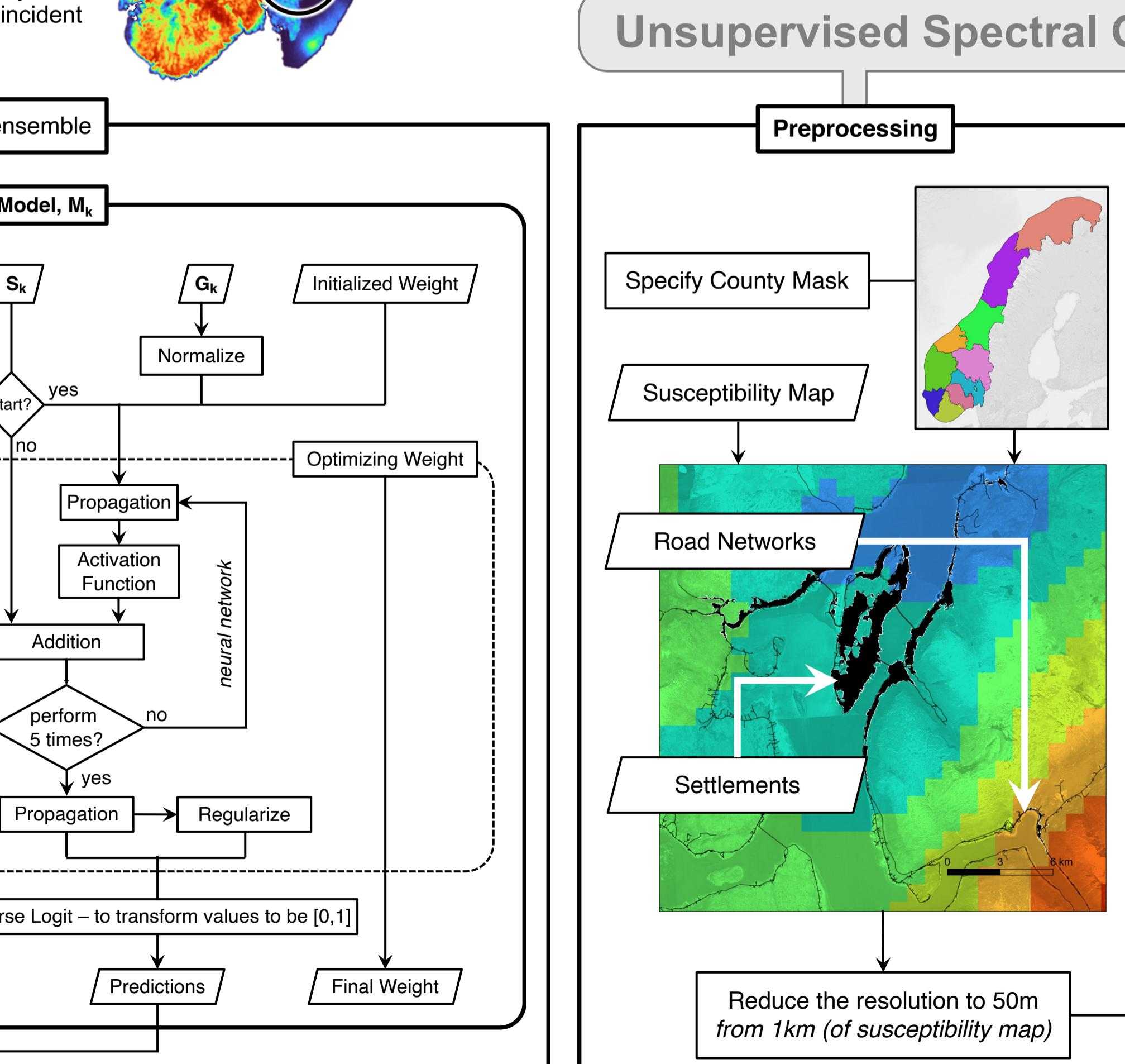
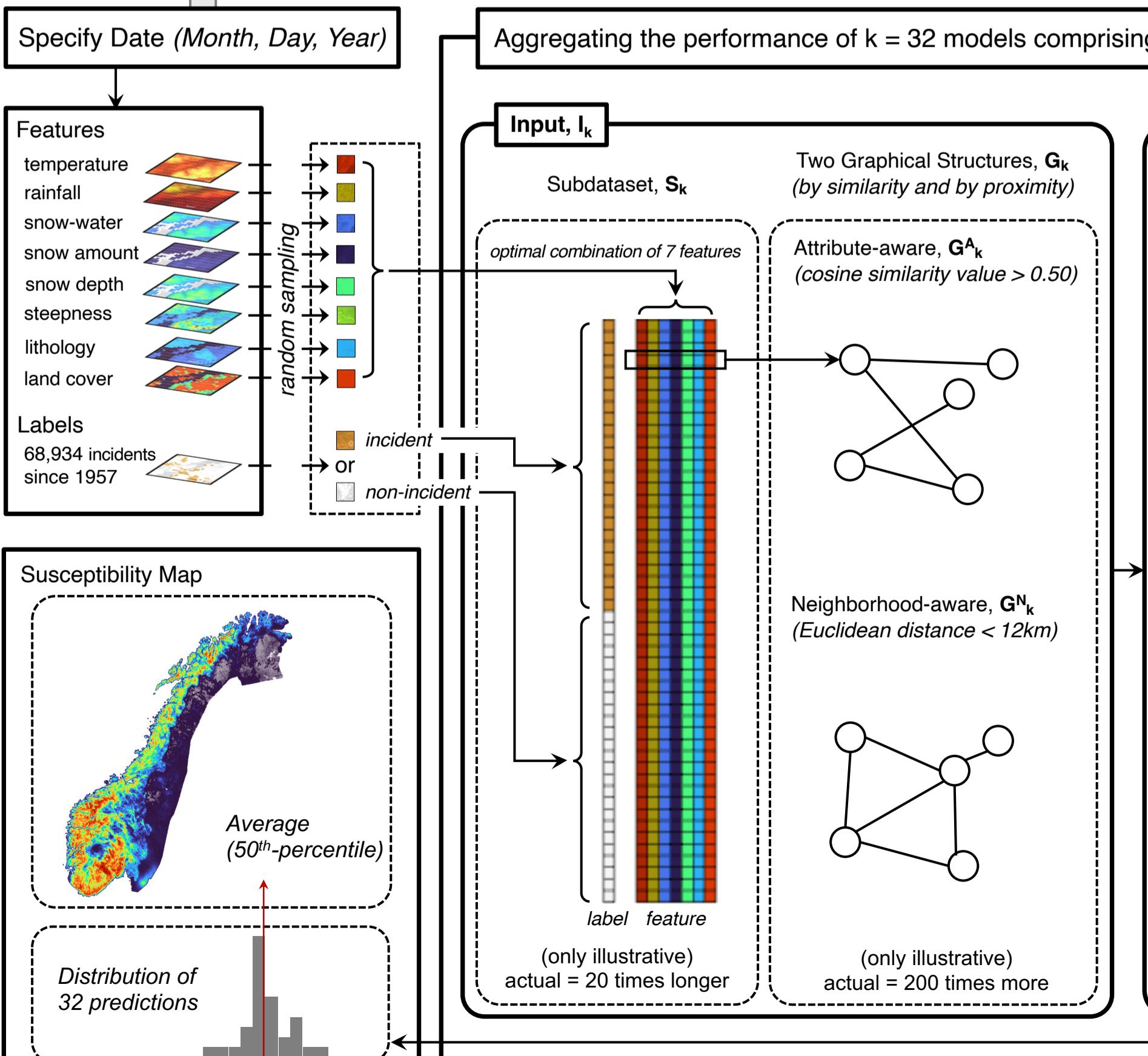
KEY POINTS: A new graphical perspective

- Our novel **INTERGRAPH** approach advances the current Norway early warning system from mass movements and offers a transferrable method for other countries.
- It achieved 86.25% accuracy, reliably producing daily 1km-by-1km susceptibility map and settlement exposure.
- It has improved exposure information at the highly granular level between 257,000-km roads and over 4,700 settlements groups across Norway.



METHOD: The INTEGRAPH approach

Supervised Ensemble Graph Neural Network



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