

## Talent-to-Vec: Using Network Graphs to Validate Models with Data Sparsity

**Authors :** Shaan Khosla, Jon Krohn

**Abstract :** In a recruiting context, machine learning models are valuable for recommendations: to predict the best candidates for a vacancy, to match the best vacancies for a candidate, and compile a set of similar candidates for any given candidate. While useful to create these models, validating their accuracy in a recommendation context is difficult due to a sparsity of data. In this report, we use network graph data to generate useful representations for candidates and vacancies. We use candidates and vacancies as network nodes and designate a bi-directional link between them based on the candidate interviewing for the vacancy. After using node2vec, the embeddings are used to construct a validation dataset with a ranked order, which will help validate new recommender systems.

**Keywords :** AI, machine learning, NLP, recruiting

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