

Pixie is a graph-based recommendation method used to guess what users might like. It treats all users and content, like movies or images, as nodes in a big graph. If a user watches a movie, a edge connects the user node to the movie node. This creates a large network that shows the relationships between users and content.

The main idea of Pixie is “random walk.” This is like a person walking randomly on the graph. Starting from a movie you watched, the walk jumps to other users who watched the same movie, then to other movies they like, and so on. The more often a movie is visited during this walk, the more likely it is to be related to you and it becomes a good recommendation.

To make recommendations more personal, Pixie doesn’t always suggest the most popular movies. It adds some smart rules, like not visiting the same user repeatedly or lowering the chance of visiting very popular movies. These tricks help recommend items that match your personal taste better.

Many big companies use algorithms like Pixie, such as Pinterest and TikTok, to recommend products, videos, or other content. One big advantage of Pixie is that it works very fast. It’s great for real-time recommendations, like when you just click on a video or product, and the system immediately shows you similar things you might like.