This project is generously funded by [Helios Education Foundation](https://www.helios.org/how-we-work/investment-history/). The recommender system is embedded in a teachers' professional learning platform with more than 10,000 users, [Flamingo](https://platform.flamingolearning.com/user/login). There are two components in the system: (1) a hybrid recommender system that recommends courses to take and (2) a semantic matching system that recommends videos and readings based on participants' quiz answers. The hybrid recommendation system consists of three deep learning based filtering algorithms: i) knowledge-based filtering that resembles an expert system, where information is filtered based on content experts’ opinions on learning paths of users with different goals (e.g. professional development, earning credentials, or content review); ii) content-based filtering that incorporates manually created metadata of users (e.g. learning styles) and learning resources (e.g. categories, difficulty, and etc.), as well as the current user’s previous actions; and iii) collaborative filtering recommends by calculating metrics (e.g. similarity) from other users’ prior actions. The semantic matching system utilizes bidirectional encoder representations from transformers (BERT) to infer potential learning videos and materials based on users’ quiz answers.

Graphical user interface, text, application

Description automatically generatedA screenshot of a cell phone

Description automatically generated

Architecture of the recommender system User interface of the recommender system

Relevant publications

Check out later

Graphical user interface

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