Skill And Job Recommender system

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Abstract

The rise of digital communication and the spread of the internet has made an enormous impact in every industry. One such domain is the Hiring process, where a job seeker applies to a job by creating a profile on a job portal by providing all his/her work preferences. These work preferences of each user can be collected from each user and provide job recommendations based on their preference. There hadbeenworkdoneinthisfield,whereresearchershaveimplementedRecsysusing the Hybrid filtering method as user data had previous interaction with item (Rafter etal.,2000).Inthisdissertation,wehaveapproachedtheproblemwiththethree-tier approach design. Data acquired for our study has no previous interaction between the user data and Job listing data. With such a dataset, we have addressed the issue of cold start from both User and Job perspective. Also, recommend the top-n job to the user by analyzing and measuring similarity between the user preference and explicit features of job listing using Content-based filtering, which is devised in support of natural language processing and cosine similarity. The Recommender Systemisthenevaluatedusingprecision,recall,andF1score(Barrón-Cedenoetal., 2009). The top-n recommendation made to the user is presented in the third tier of the design, a web app deployed in the local server. The presentation layer web-app is developed using Plotly's dash web framework.

Keywords: Recommender system, Job domain, Content-based filtering,Natural languageprocessing,cosinesimilarity

Submitted By

P.Balamani/813019104005 S.Gowri/813019104007

K.Srimathi/813019104032 S.Thenmozhi/813019104033