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# Project Report: User-Job Suitability Measurement System

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## Abstract

Abstract here.

## 1 Introduction

## 2 Problem Formulation

if we assume that all job seekers are extremely knowledgeable (understand clearly and completely the profile and requirement of every job) and rational (never apply for the unsuitable jobs), we can directly makes use of the score obtained in the application prediction. However, such assumption receives little support from practical analysis, in the sense that people tend to apply for the job positions with higher salaries and correspondingly much more capability seeking.

### 2.1 Suitability Measurement As Matrix Completion

#### 2.1.1 Failure of traditional binary classifier

#### 2.1.2 Content-based Filtering

#### 2.1.3 Collaborative Filtering

Nearest neighbour method and latent factor model are two major models for Collaborative filtering.

#### 2.1.4 Features-incorporated Matrix Completion

A recently emerging paper proposes an inductive matrix completion method, in which features of items are considered while completing matrices. Such feature incorporation method for collaborative filtering approach in a way that it could address more sparse matrices. From this perspective, we can see it as a new approach that incorporates advantages from both collaborative filtering and content-based filtering.

### 2.2 Suitability Measurement with Prerequisites

1. simulate course recommendaiton (by adita)

**2.3**

**2.4**

### **3 Experiments**

#### **3.1 Application Prediction**

2. suitability problem

#### **References**