Recommendation Engine For Online Programming Platform

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Video URL:

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OVERVIEW

Competitive programming is a mind sport usually held over the Internet or a local network, involving participants trying to program according to provided specifications. The aim of competitive programming is to write source code of computer programs which are able to solve given problems. Major companies hire from top coding platforms. The planning, workforce, time and money which goes into recruiting is cut to half by the competitive coding platforms.

GOALS

1. To build a model that can predict the number of attempts required by user to solve a problem based on problem complexity and the user's profile as to the number of problems solved, total number of submissions completed, user contribution to the online platform, location of the user, rating of the user and the rank of the user.
2. Recommending the questions that a programmer should solve given his/her current expertise is a big challenge for Online Programming Platforms but is an essential task to judge a programmer's expertise in that particular area which will help companies in their hiring process.

USE CASES

Online platforms: Can use the predicted attempts to evaluate the expertise of the user and suggest questions appropriately.

Hiring Company: Know the expertise level of candidates and hire appropriate candidate who fit their expectations.

DATA

We will work with the data present on the below website

Data

PROCESS OUTLINE

1. Data Preprocessing
   ➔ Preparing final dataset by joining three subset of data
   ➔ Data Cleaning, handling missing values.
2. Exploratory Data Analysis.
3. Study supervised approaches and select the best model for prediction.
4. Design a pipeline and system to implement this approach.
5. Deploy the model.

MILESTONES

Timeframe	Delivery
Day 1-2	Topic Selection
Day 3-5	Data Gathering and Preprocessing
Day 6-7	Exploratory Data Analysis
Day 8-12	Model Building, Training, Selection
Day 13-14	Deployment of model
Day 15	Documentation

Deployment Details

1. **Language**: Python
2. **Container**: Docker