

Project Proposal Draft

Problem:

Codeforces is a website that hosts competitive programming contests
As of 2018, it has over 600,000 registered users --Wikipedia
Competitors participate in rated contests, then their rating will change

Research question:

An analysis of the codeforces ranking system
People interested because contestants sometimes get confused about their rating change

Related work:

Design a ranking algorithm
Data collection
Run the algorithm
Check my result and improve
Re-run
.....(repeat)
Until I get a satisfactory result: by checking the predictability
As an implication: design the optimal contest strategy to get the maximum score and get the maximum rating rise

Methods: Elo method

Or some other methods that calculates rating based on group performance, not the score between two contestants

Analysis: use random user, get their score in contests as data, predict their rating change, calculate the percentage of predictability

Data: random rated contests, participants' performances (scores), change of rating after contest