

cp-anlyzr

Competitive Programmer's Analyzer

**A Tool to Visualize Problem Solving
Activity and Progress**

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<https://github.com/Saikat-S/cp-anlyzr>

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Competitive Programmer's Analyzer

Our plan is to make a competitive programmer's analyzer which will take handle_name or username or email of a competitive programmer and show some graphs and statistics for that handle. We will show many graphs to represent current condition of a user, his activity, progress in problem solving.

Our Planed Features

- Verdicts chart
- Show progress chart after a training session on specific topic
- Progress of a training based on weighted average of problem hardness
- Solved problems languages chart
- Solved problems tags chart
- Solved problems levels chart
- Total tried problems count
- Total solved problems count
- Average and max attempts
- Max AC for a single problem (It indicates in how many ways someone solved a problem)
- List of unsolved problems

We will try

- Suggestion for problems based on ones solved problem categories and hardness.
- A make activity chart show which will show how active the user is in previous months.

Implementation Idea

We planed to build a Web App or a Desktop App using Java. Codeforces and most other platforms provide public APIs, through which machine-readable JSON formatted data is available, generally. We will use these APIs to get data of a user by sending HTTP-request to the server. There are many library to consume APIs in Java. Some of them are:

- <http://hc.apache.org/httpcomponents-client-ga/>
- <https://github.com/square/okhttp>
- <http://square.github.io/retrofit/>

Making a Web App will be difficult then building Desktop App. Java Swing or JavaFx will be enough to build a Desktop App. On other side to build web based App we have to use Servlet, JSP, JDBC and a database.

Objectives

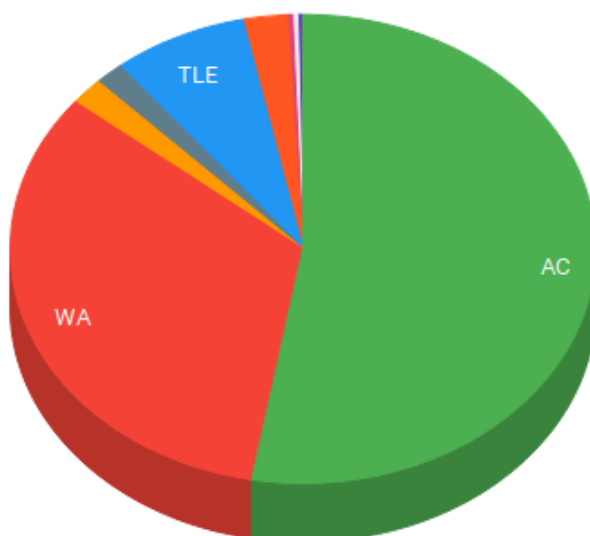
- Determine individuals programming skill on various categories.
- Easily shows ones powerful area of problem solving categories
- One will able to know his particular weak area of problem categories.
- Will be able to know his progress through months.
- Suggested problems will be helpful to and guide a competitive programmer.

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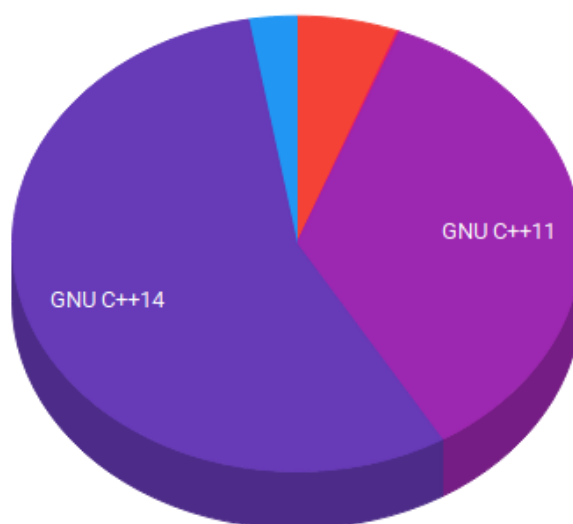
The tool is given under MIT license, read more: <https://opensource.org/licenses/MIT>.

Some Sample Charts

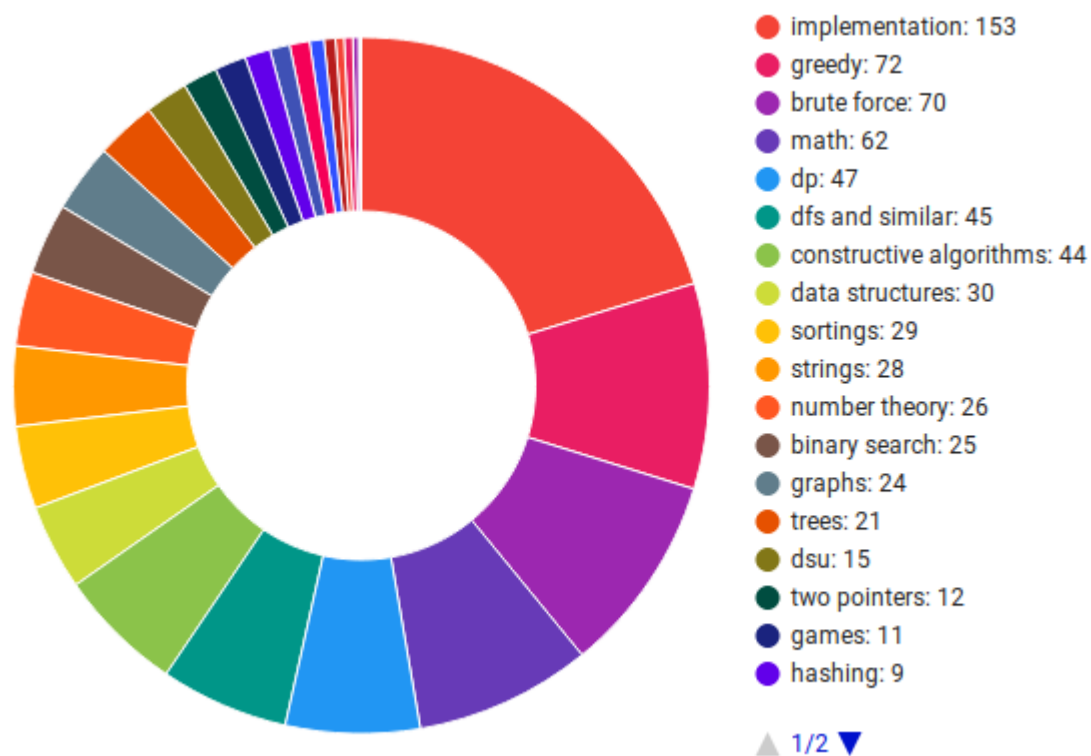
Verdicts chart



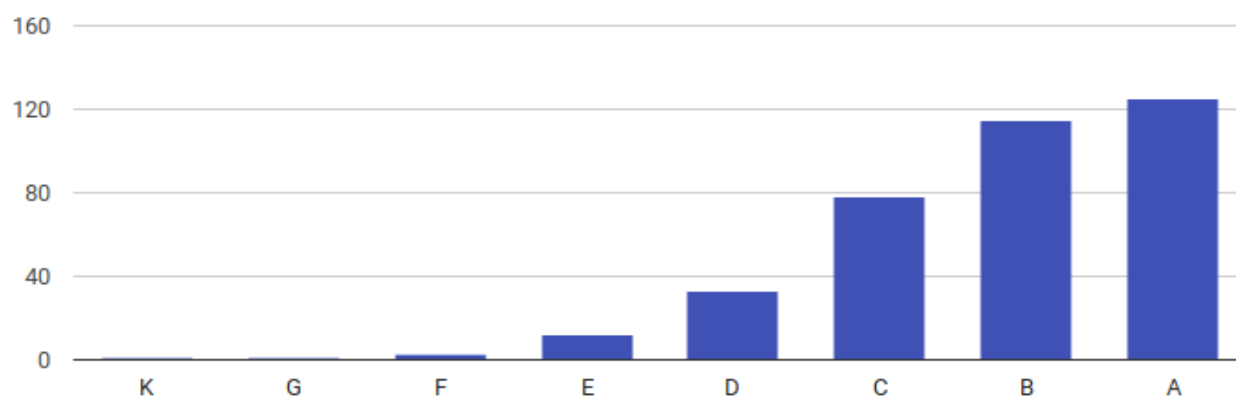
Languages chart



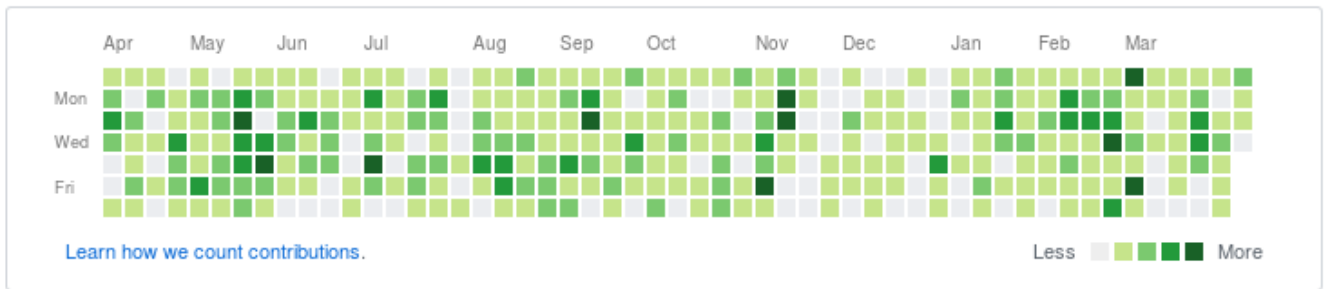
Tags chart



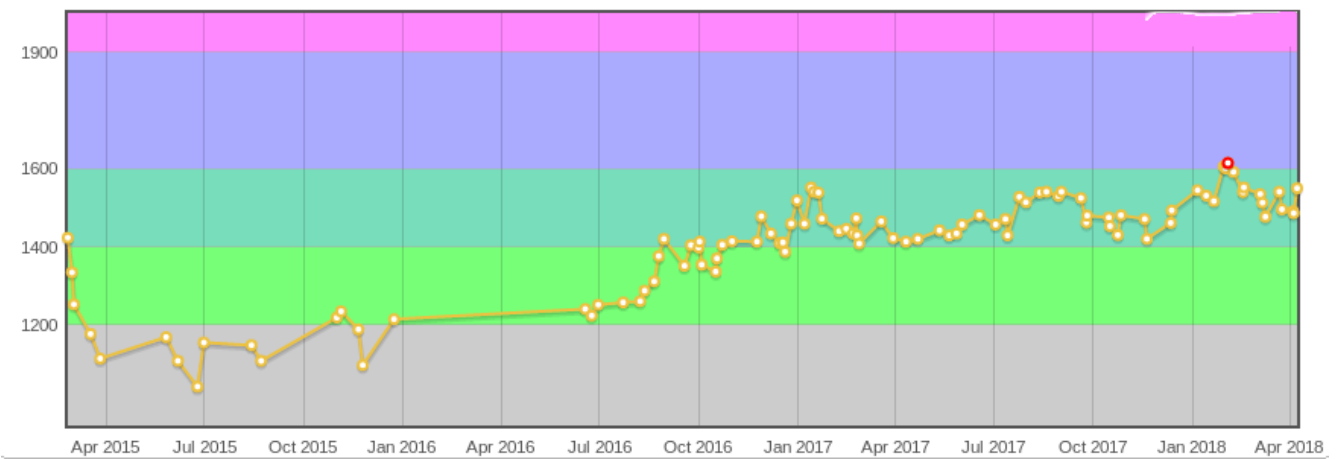
Levels chart



Activity Chart



Rating Chart



Courtesy of Charts: <http://codeforces.com/>, <http://cfviz.netlify.com/>, <http://stopstalk.com/>