

MR01 Improve the Software of Wikipedia

Background

MediaWiki is the software running Wikipedia. While editing Wikipedia is straight forward, editing the MediaWiki source code requires a bit more effort. In this project, you will be guided to your first contribution to the open-source project MediaWiki.

Previous runs of the project enabled the support of mathematical formulae in Wikidata and fixed problems with math rendering that were unsolved for more than 10 years.
([Example](#))

Goal

Improve the MediaWiki software in production by fixing a bug or implementing a feature requested by the community.

Tasks

1. Understand the problem and develop an implementation plan
2. Get Community Consensus
3. Set up a local development environment
4. Develop unit and integration tests
5. Interactively improve your code according to the suggestions
6. Get your code deployed and test it in production
7. Update the documentation and issue tracking software.



Unuaiga, Wikimedia Hackathon Barcelona 2018 (04), CC-BY-SA 4.0



Moritz Schubotz

Moritz.Schubotz@fiz-karlsruhe.de



Noah Gießing

Noah.Giessing@fiz-karlsruhe.de



MR02 Contribute to Lean's mathlib

Background

Automated theorem proving has a long history. However, only recently, leading mathematicians such as Terrence Tao or Kevin Buzzard, started promoting the proof assistant lean and made this system become popular on GitHub. With 333 contributors mathlib4 is the most active project on formalized mathematics.

Goal

Improve the Leans mathlib in production by fixing a [bug](#) or implementing a feature requested by the community.

Tasks

1. Understand the problem and develop an implementation plan
2. Get Community Consensus
3. Set up a local development environment
4. Develop unit and integration tests
5. Interactively improve your code according to the suggestions
6. Get your code deployed and test it in production
7. Update the documentation and issue tracking software.

```
1 import Mathlib
2
3 example (a D : N → R) |
```

Terrence Tao, <https://terrytao.wordpress.com/2023/12/05/a-slightly-longer-lean-4-proof-tour/>



Moritz Schubotz

Moritz.Schubotz@fiz-karlsruhe.de



Noah Gießing

Noah.Giessing@fiz-karlsruhe.de

