Cracking the code
Helping University students contribute code to Open Source Projects
60% of students failed
Now Imagine if

Contribute Code to your Project
Helping Students Contribute Code to Open Source

Christos Bacharakis
Open Source Student Network
Program Manager
@bacharakakis
Agenda

- Brief History
- Approach
- Learnings & Recommendations
Open Source Student Network

Brief History
January 2017: Identifying the need of the Open Source Student Network

- Open Source is happening primarily outside the classroom
- There is significant interest but low literacy
- There are significant barriers to entry
Brief History

To fuel the open movement by creating and supporting a network of clubs on university and college campuses in the USA who are learning about and contributing to open source projects.
Approach
Approach
User journey towards Open Source contribution

**Discovery**
Identifying a project(s) to work on

**Engagement**
Diving more into the project - readme, issues, maintain etc

**Onboarding**
Setting up the development environment and finding help

**Contribution**
Writing code, pushing it to the repo and opening a pull request

**Retention**
Figuring what to do after a successful contribution
Important Questions

- What are the information students care about?
- Which mentorship model is more successful?
- What is the best way for surfacing contribution opportunities?
We are looking to **discover and/or validate opportunities and best practices** for supporting University Tech students throughout their journey towards contributing code to Open Source Projects.
User journey towards Open Source contribution

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Learnings & Recommendations
Common Voice

The Common Voice project is Mozilla's initiative to help teach machines how real people speak.

Voice is natural, voice is human. That's why we're fascinated with creating usable voice technology for our machines. But to create voice systems, an extremely large amount of voice data is required.

Most of the data used by large companies isn't available to the majority of people. We think that stifles innovation. So we've launched Project Common Voice, a project to help make voice recognition open to everyone.

Setup development environment time: 5' with Docker, 15' without it

Technologies

Nodejs

npm

FFmpeg

Docker

Amazon S3

MariaDB

Contribute

Contribute Code to Common Voice

Find easy tasks to begin with

Additional resources

By participating in this project, you're agreeing to uphold the Mozilla Community Participation Guidelines.

For general discussion (feedback, ideas, random musings), head to our Discourse Category.

Come chat with us on Slack: Invite link
Technologies

- Node.js
- npm
- Amazon S3
- MariaDB
- FFmpeg
- Docker
- Yarn
Setup the development environment

Docker setup
We provide a `docker-compose` setup to orchestrate the local development environment configuration using `docker`.

Requirements
- `docker`
- `docker-compose`

Setup
Fork and clone the repository onto your computer. Then run the following commands to spin off `voice-web`:

```
> cd voice-web
> docker-compose up
```

This is going to:
- Launch a mysql instance configured for `voice-web`
- Launch an s3proxy instance to store files locally and avoid going through setting up AWS S3.
- Mount the project using a docker volume to allow reflecting changes to the codebase directly to the container.
- Launch `voice-web` server

You can visit the website at `http://localhost:9000`.

Local setup

Requirements
Fork and clone the repository onto your computer.

Either create a MySQL root user that conforms to the default `DB_ROOT_USER` and `DB_ROOT_PASS` in `/server/src/config-helper.ts` or create your own config.

Then cd into the project directory and enter the following commands:

```
yarn
```
Learnings

Setup the development environment

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- ffmpeg
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- Amazon S3
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- Yarn

Contribute

- Contribute Code to Common Voice
- Find easy tasks to begin with

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Mission & project description upfront

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https://voice.mozilla.org/en
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Easy tasks to begin with

1. Required information not starred for adding projects  
   #32 opened 27 days ago by jasmineflorencio

2. Incorrect issue count  
   #30 opened 27 days ago by jasmineflorencio

3. Documentation: create the about page  
   #29 opened 27 days ago by bacharakis

4. Search for differences between website and designs  
   #28 opened 27 days ago by alexdor

5. Background and foreground colors do not have a sufficient contrast ratio.  
   #27 opened 27 days ago by alexdor
Easy tasks to begin with - documentation

Listen success: UI issues on iOS #1478

rlettan opened this issue on Sep 20 - 0 comments

rlettan commented on Sep 20

[Environment]:
iOS 11.4.1, Firefox, Chrome, Safari
Common Voice app

[Steps to reproduce]:
2. Go to Contribute -> Listen section
3. Listen 5 clips

[Actual result]:
1. “Ready to do more 5” text is cut at the bottom and the arrow is missing
2. Instead of “Log in/Sign up” is “Create a profile” button. The button is too small
3. The number of submitted clips is not displayed
Contributors

Greetings 🎉 for the contributors 😊

Fellow open web developers are most welcomed! 😵

How can I contribute?

Following are help-in-need domains. We are open to accept any kind of contributions.

Contributing areas:

- Addon JS snippets for better integration.
- GNU Radio scripts development.
- Open Web practices.
- Project logo design - Logo should represent:
  - Name: FirefoxB2BRC
  - Theme containing GNUradio and Firefox for open internet.
  - Size: 320 x 320 px - 459 x 459 px
  - Open Design formats are appreciated. Make sure to send SVG along with PNG
Contributing to Common Voice

🎉 First off, thanks for taking the time to contribute! This project would not be possible without people like you. 🎉

Code of Conduct

By participating in this project, you're agreeing to uphold the Mozilla Community Participation Guidelines. If you need to report a problem, please see our REPORTING.md guide.

How Can I Contribute?

Add More Sentences

Help us add more sentences for other volunteers to read. See issue 341 for details.

Bug Fixes and Feature Enhancements

All of our current issues can be found here on GitHub. Anything with a help wanted tag is up for grabs.

Project requirements

- NodeJS (v7 or higher)
Learnings

The importance of the network

- Community Participation Guidelines - [link]
- Code of Conduct
- Office hours
- Communication channels

Healthy

Inclusive

Safe
Recap

Mission and Project description upfront

Specific technologies
Time to setup your dev environment
Clear documentation
Easy tasks to begin with

Community Participation guidelines
Communication mechanisms
You are a **coder**. Open-source projects need your **skills**.

We’ll connect you with meaningful contribution opportunities!
Tell us a bit about yourself

I do my magic in [JavaScript] and I'm looking for issues that are [Easy] & [Bugfix]

Because we have just for you

30 issues
<table>
<thead>
<tr>
<th>Issue Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workspace Comment Resize Icon Renders A Little Outside The Ws Comment Box</td>
<td>Thu Sep 27 2018</td>
</tr>
<tr>
<td>Expected Behavior: Resize icon is always trimmed to the size of the comment box.</td>
<td>Easy, javascript, Bugfix</td>
</tr>
<tr>
<td>Actual Behavior: Resize icon renders a little outside the ws comment box when comment is unselected / highlight border when comment is selected</td>
<td></td>
</tr>
<tr>
<td>Code Demo On IOS: Double Execution Upon Tapping Run</td>
<td>Thu Sep 27 2018</td>
</tr>
<tr>
<td>Expected Behavior: Tapping the run button should only execute the code once.</td>
<td></td>
</tr>
<tr>
<td>Steps to Reproduce: Add one print block from the Text category. Tap the run button.</td>
<td></td>
</tr>
<tr>
<td>Operating System and Browser: On an iPad, open the Code Demo in either Safari or Chrome.</td>
<td>Easy, javascript, Bugfix</td>
</tr>
</tbody>
</table>

- Thanks for opening an issue for us! Before you open an issue, please check if a similar issue exists or has been closed before. If you're asking a question about how to use Blockly in your application, please ask questions on the mailing list, instead of filing issues:

https://groups.google.com/forum/#!forum/blockly

- Problem statement: On iOS Safari and Chrome, in the Blockly Code Demo, tapping the run button will execute the code twice.

- Issue is browser specific; uncomment the systems you have tested. (Please comment out the systems you have tested.)

- Desktop Chrome
- Desktop Firefox
- Desktop Safari
- Windows Internet Explorer 10
- Windows Internet Explorer 11
- Windows Edge

- Device: iPad mini, 1st gen
- OS: 9.3.5
- Browser: Safari, Chrome
The Projects

Firefox Focus for Android
- 467 issues
- 17 setup
- browser
- android
- privacy
- mozilla

A-Frame
- 232 issues
- 1 setup
- vr
- webvr
- virtual-reality
- three.js
- html5
- vive
- opengl
- rift
- game-engine
- pframe
- daydream
- ees
- virtual-reality

Common Voice
- 188 issues
- open-data
- speech
- speech-to-text
- voice
- transcription
- internet-freedom

Ushahidi
- 51 issues
- 10 setup

Sahana
- 30 issues

Oppia
- 351 issues
- 2 hours setup
- education
- intensive
- learning
- python
- appengine
- tutor
- web
- javascript
- nonprofit
- angularjs
https://fixme.ossn.club
Mentorship?
Mentorship

Google Summer of Code

OUTREACHY
Mentorship

- 3-6 month internships
- Paid
- Reviewing process for entering and graduating
- 1:1 mentorship
- 3-6 months strict planning
Students profile

● Limited time
● Have exams 4-6 times per year
● Come and go every two months
● Feel intimidated contributing code
● Don’t (clearly) see the benefits of doing Open Source
Design for students

Creating Together
Sharing the tasks and costs of achieving a pre-established goal

Soliciting Ideas
Using a community to generate ideas and solutions
Mentorship with the right framework

- Design tasks/work deadline free
  - no urgent tasks/bugs, long release cycles, nice to have features
- Use the students crowdsourcing power for new ideas or solving issues
  - challenges, contests, new features ideation
- Help them solve an issue, not solve it for them
Next steps

- Use the recommendations to review your project and apply if necessary
- Explore the Framework of Open Practises here
- Add your project into the FixMe platform

Reach out for any suggestions or help christos@mozilla.com

Slides can be found on my twitter: @bacharakis