



COMMUNITY

# Expanding Open Source in Africa

**Zainab Abubakar & Mark Waite**

Experience Report



Who we're reaching

# Expanding open source in Africa She Code Africa Contributhon

Why Contributhon?

# Why Contributhon (Organizers) ?

An Africa wide open source Bootcamp focused on:

- building more women OSS contributors
- creating more diversity in the African open source ecosystem.



# Why Contributhon (Jenkins Project) ?

Improve Jenkins core and plugins with

- more contributors
- solutions to valuable problems

Improve Jenkins project

- develop group mentoring techniques







Who we're reaching

# Expanding open source in Africa She Code Africa Contributhon

Who is involved?

# Who's involved

Sponsoring organizations fund the program

- Companies
- Foundations

Funding pays participants \$500 for a month of contribution to open source



The @ Company



# Who's involved

Open source mentoring organizations

- Help participants improve their project

Propose projects with tasks

Provide mentors to coach participants

Share feedback with participants

Evaluate project at its conclusion



# Who's involved

Candidates - 180+ Women in Africa

- Students
- Recent graduates

Participants - 16 Women

Apply to the program

Participants selected based on work samples, role descriptions, and background







What we're doing

# Expanding open source in Africa

## She Code Africa Contributhon

What was the project?

# Improve Jenkins Pipeline - Snippets, Examples, Help

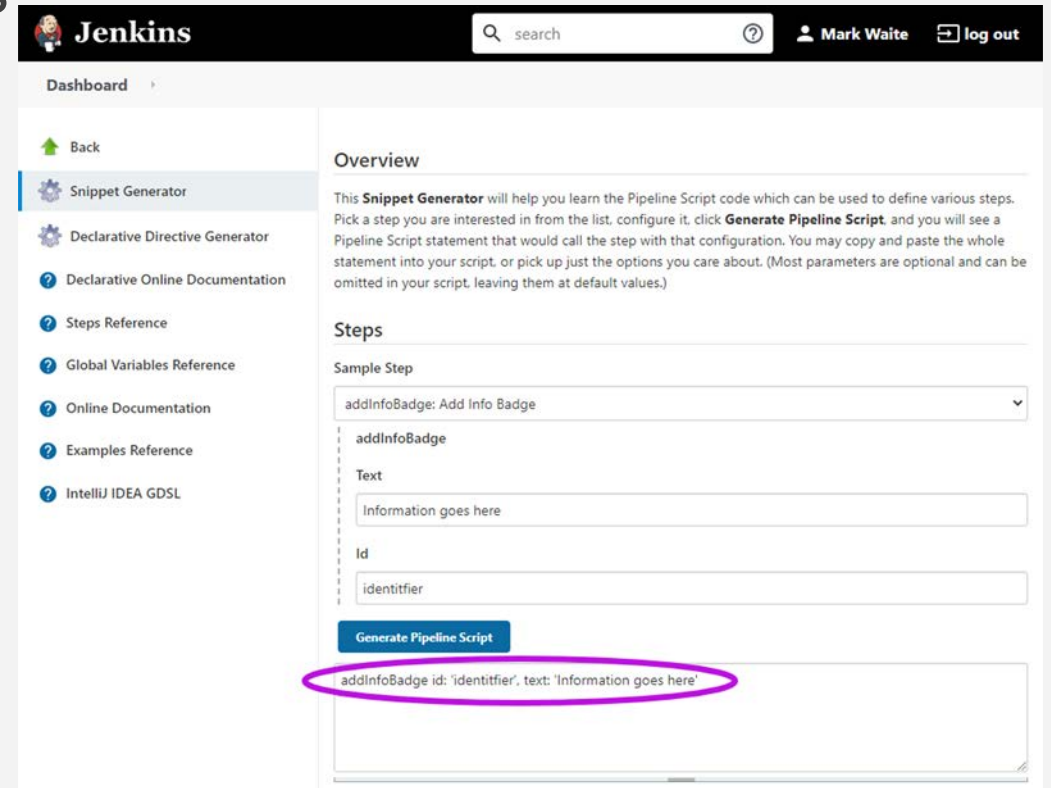
Jenkins Pipeline Domain Specific Language is code

- Users are unfamiliar with the generator tools
- Users want more examples
- Users want more help

Help the users find existing resources

Provide more examples and help

Participants learn Jenkins Pipeline, Java build



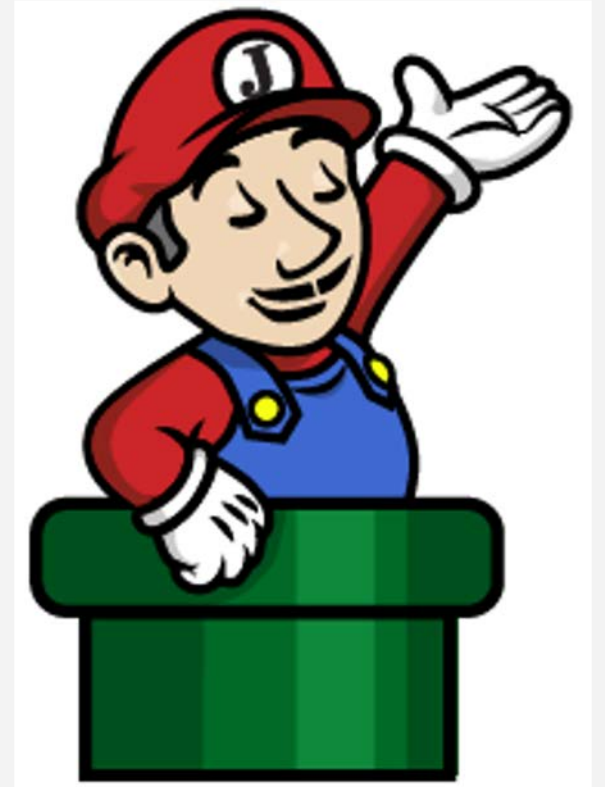
The screenshot shows the Jenkins Snippet Generator interface. The left sidebar contains a navigation menu with the following items: Back, Snippet Generator (highlighted), Declarative Directive Generator, Declarative Online Documentation, Steps Reference, Global Variables Reference, Online Documentation, Examples Reference, and IntelliJ IDEA GDSL. The main content area is titled 'Overview' and contains a description of the Snippet Generator. Below this is a 'Steps' section with a 'Sample Step' dropdown menu set to 'addInfoBadge: Add Info Badge'. The configuration fields for this step are 'Text' (with the value 'Information goes here') and 'Id' (with the value 'identifier'). A blue button labeled 'Generate Pipeline Script' is located below the configuration fields. The output of the generator is shown in a text area, which contains the generated Pipeline Script snippet: `addInfoBadge id: 'identifier', text: 'Information goes here'`. This snippet is circled in red.

# Project phases

Progressively more challenging steps

- Create a Jenkins Pipeline
- Build a Jenkins plugin
- Modify existing Pipeline help
- Insert missing Pipeline help
- Suggest Pipeline Syntax snippet generator in plugin docs
- Add snippet generator hints to Pipeline step help

We thought [this](https://bit.ly/contributhon-plan) was a pretty good plan, but ...  
(<https://bit.ly/contributhon-plan>)





## Challenges

# Expanding open source in Africa She Code Africa Contributhon

Challenges and surprises

# Challenges (Organizers)

- Finding Mentoring Organizations
- Funding and Sponsors
  - Cross Country Boundaries
- Selecting appropriate Program Timelines
- Timezone Complexity





## Challenges (Organizers)

- Matching selected participants with available projects
- Managing differences in participants knowledge of open source tools like git, etc.



# Don't miss the real goal!

Help participants develop skills to be ongoing contributors to open source

Project tasks should help the participants develop open source skills

Encourage interaction between mentors and participants



# Remember the participants

Most participants are

- Beginning as developers
- Javascript their most likely language
- Web development most likely experience
- Enthusiastic but inexperienced

First experience with Jenkins

First experience with Java

Limited experience with Git and GitHub



# Group mentoring is more difficult

Uncomfortable asking questions

Assume others already know the answers

Scheduled group time rarely works for all

New communication channels and patterns

⇒ Technical introduction sessions

⇒ Personal introductions during mentoring

⇒ Mentors praise and encourage questions







## Challenges

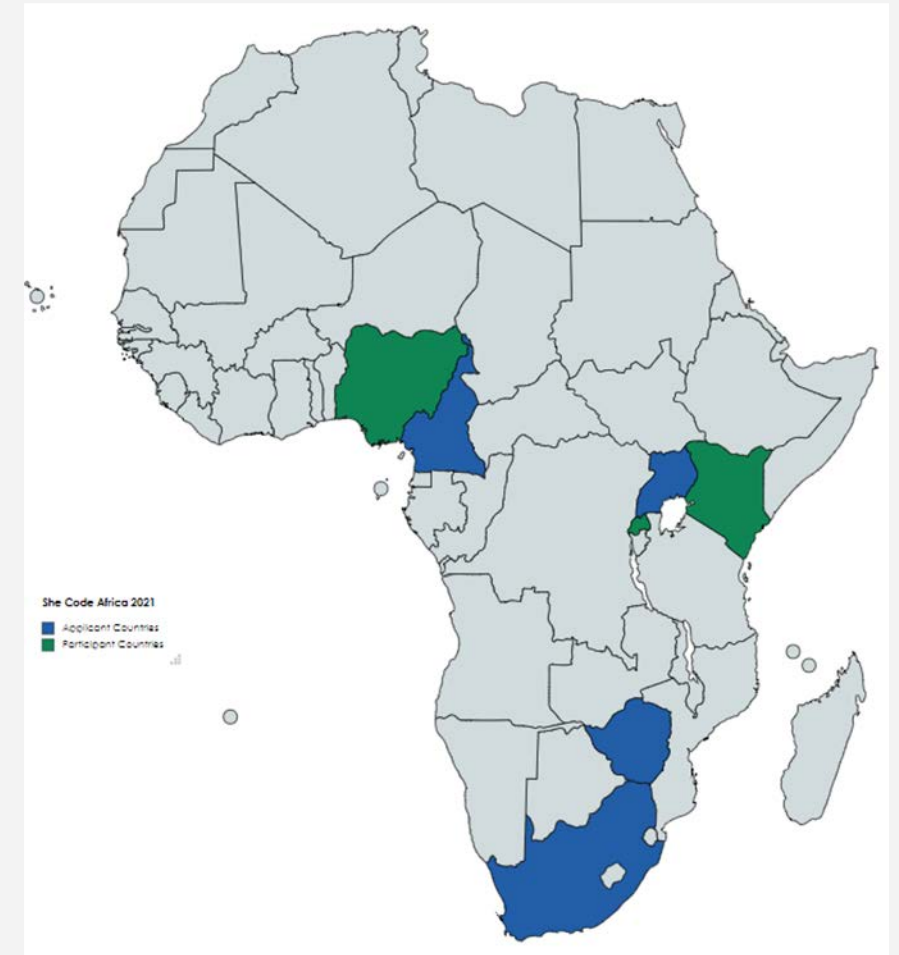
# Expanding open source in Africa She Code Africa Contributhon

Success Metrics



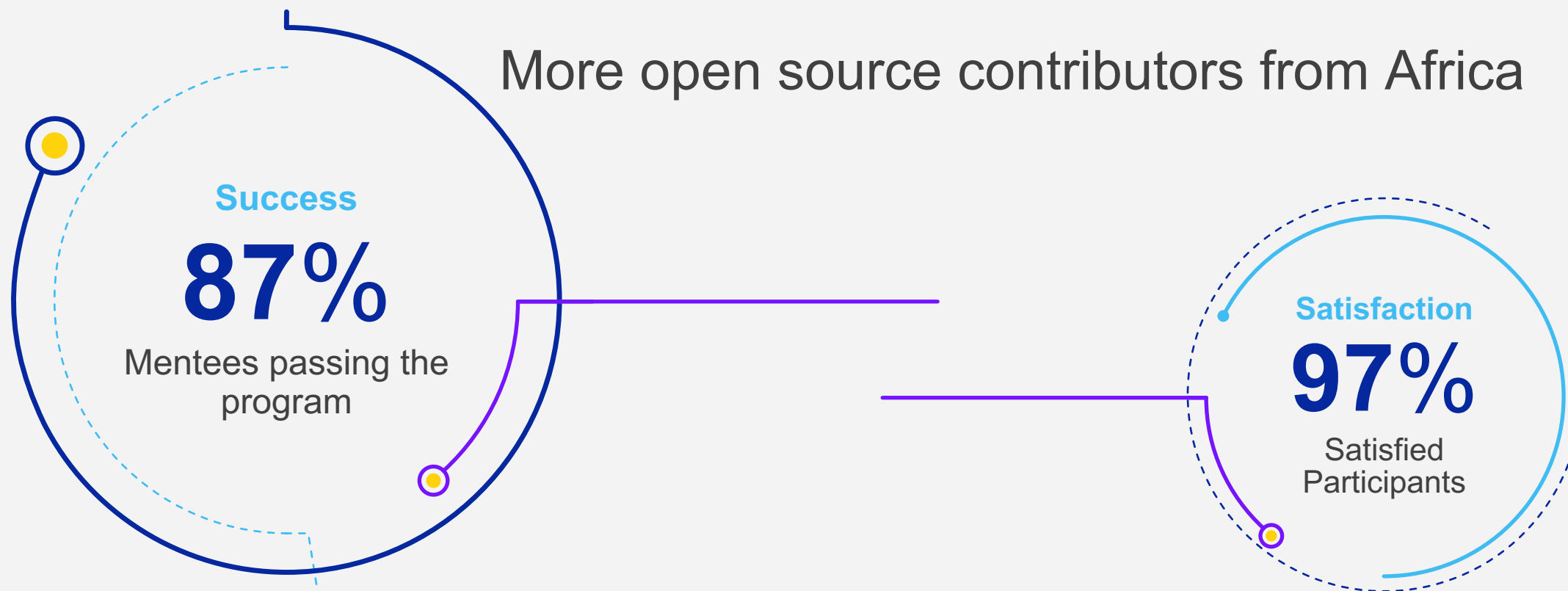
# Success Metrics (Organizers)

- Applicants from 7 African Countries (Cameroon, Kenya, Nigeria, Rwanda, South Africa, Uganda, Zimbabwe)
- 3 African Countries Participation (Kenya, Nigeria, Rwanda)



# Mentee Success and Participant Satisfaction

Contribution by the numbers





# Thank you!

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