Python Packaging Fellowship

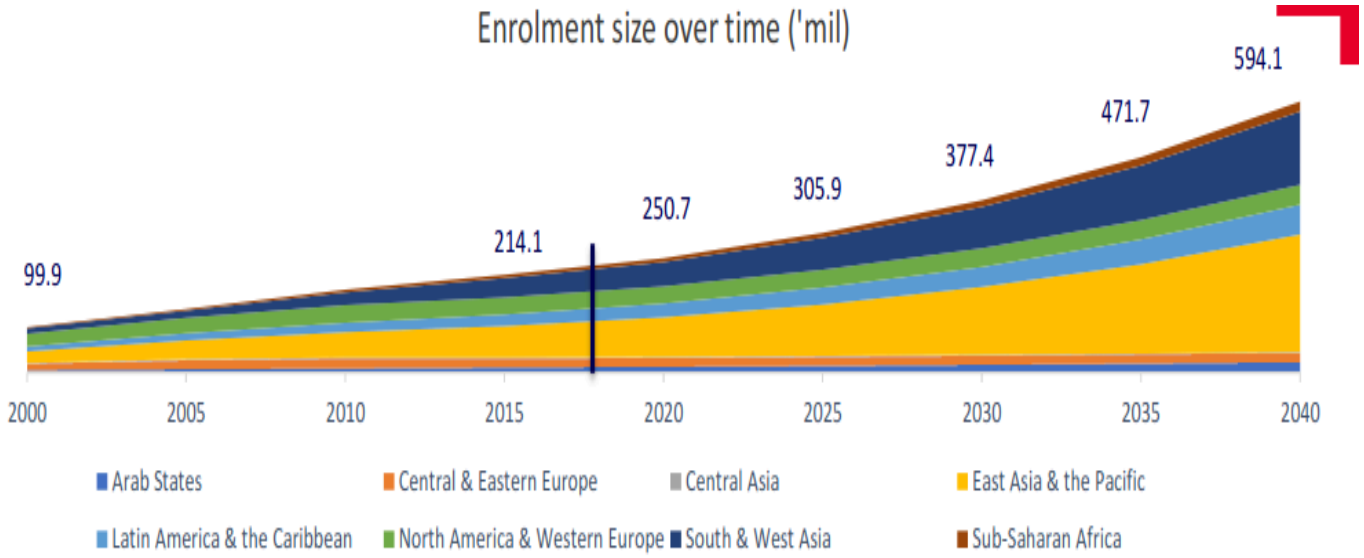
Introduction

An open-source community is unique in bringing together people who volunteer their time to build innovative software solutions. This distributed, decentralized community model is the linchpin that dictates the success of an open-source project. Long-term contributors are most often volunteers who are supported by their full-time jobs to allot some time to open-source projects. This implies that for a new contributor without financial support, there is no tangible incentive to participate in an open-source community although the intangible benefits are plenty. This situation inevitably leads to developer burnout, lack of new contributors, poor diversity and an increasing number of technical issues yet to be resolved.

One of the biggest existential threats facing the Python Packaging community is the lack of new contributors. The legacy knowledge gained over the years is calcified in long-term contributors increasing pressure on them and also leads to additional barriers for new contributors. This document proposes a fellowship programme that aims at bringing in new contributors, improving diversity and offers equitable compensation for mentors and fellows. The success of this programme will be measured by how many new contributors become long-term contributors and to what degree diversity improves in the community.

Key demographic

Recent studies show that the number of students enrolled in tertiary education is 214.1 million and is projected to increase to 594.1 million in 2040 [1]. This provides an important pool of talent and expertise to target for new contributors in the Packaging community.



Projected global enrollment of students in tertiary education [1]

This fellowship will be open to any student currently enrolled in tertiary education. By comprehensively targeting tertiary education institutions around the world, we expect to receive sizable interest from students. By encouraging and mentoring these students, we should expect to see new contributors become long-term contributors and in the process improve the diversity of the community.

We target students for the following reasons

- As students have not yet decided their professional identity, they would be open to adding ‘open-source contributor’ to their professional identity.

- Students have time for co-curricular projects. This fellowship could be considered as a part-time job.

- Students are interested in projects that would improve their career prospects.

Benefits for Python Packaging

- Regular influx of diverse students who will potentially become long-term contributors

- By improving diversity, the community will gain a better understanding of geographical, social, language barriers that exist within the community. The community will be able to identify innovative solutions to better serve Python Packaging users around the world.

Benefits for students

- Students learn real-world skills such as coding, documentation, version control, triaging and participating in technical discussions.

- The impact on career prospects will be immense.

Proposed plan

As a pilot scheme, the fellowship participants will work with only one Packaging Project. The plan can easily be scaled to include more Packaging Projects depending on demand and funding.

Phase 0

This phase will be devoted to preparing for the fellowship. This phase will decide the scale of the pilot fellowship, number of mentors/participants and also ensure the fellowship is geared towards success.

The specific objectives of this phase are-

- Set up a fellowship working group that will meet once per month
- Identify potential ways for comprehensive online/offline marketing

- Identify funding sources and apply for funding. The amount will be decided by the number of mentors and fellows we expect to participate in the fellowship.
- Identify success metrics for participants to move from phase 1 to phase 2. Identify success metrics for the fellowship.
- Invite students to sign-up for the fellowship. Set up communication channels.

Phase 1
In this phase, all participants will be required to submit code resolving issues in the chosen Project. The issues would be suitable for first-time contributors. Using the success metrics defined in Phase 0, a shortlist of __ participants will be invited to participate in Phase 2. This phase will also assess a participant's ability to work independently, commitment to open-source contributions and their drive to become a long-term contributor.

Phase 1 will last 3 months. This will allow participants to become familiar with the codebase.

Phase 2
In this phase, the fellows will be required to work on extended fellowship projects. The mentors will construct projects around existing issues. Apart from submitting code and writing documentation, fellows will be required to triage issues, lead technical discussions and participate in other activities that are usual in an open-source community. This will give fellows a flavour of what it is to work on an open-source project. Depending on funding, time, and logistics, this phase could also include 1:1 mentoring with long-term contributors which will be crucial in encouraging fellows to become long-term contributors themselves.

This phase will last 6-9 months. Fellows and mentors will be expected to contribute __ hours per month. Fellows and mentors will be compensated in this phase.

Comparison with other programmes

While there are other internships/fellowships that involve open-source projects, the programmes are focused on specific internship projects. They do not aim at long-term participation in a specific community. By requiring Python Packaging fellows to code as well participate in our community, we expect a subset of fellows to become long-term contributors.

This fellowship will not ask participants to submit project proposals as it will require moderate-advanced technical skills which could deter new contributors. These proposals are assessed on meritocratic criteria which could introduce bias based on university, grades and course. Such criteria are no indication of a student's technical ability, passion, ability to work independently and motivation to become an open-source contributor.

References
[1] Massification of higher education revisited, Angel J Calderon, RMIT University https://tinyurl.com/4bbmm7c2