Breakout Session on Community Outreach and Engagement
November 6, 2023

A. Introductions

Where are participants from?

- All over the place, across many different universities
- Between 35 and 40 participants

Bolei Zhou – my infrastructure project!

- Project is an open source simulation platform for AI research on autonomous driving (MetaDriverse, can be found on github)
- API that allows input from different companies, as many companies make their data available, but it's in disparate formats
- 14K downloads
- Thinking about community for him means both the fields of potential impact (i.e. computer vision, robotics & RL, AI safety and governance, transportation, networking & communication) and potential users (i.e. university research labs, autonomous driving companies, transportation agencies, educational settings)

How to engage with the community and grow user population?

- Followup question – where does engagement with students fit in? Is this engagement with user populations, or is this more about outreach?
    - Students are potential future users!
- Demonstrate research potential of infrastructure, e.g. students adding new features to the infrastructure
- Connect with, and cohabit with, existing communities
    - Think of these as collaborators rather than competitors wherever possible
- Provide detailed documentation and examples for easy onboarding

B. General discussion

MEANING: What does community mean to you, and why is it important for outreach efforts?

- Common response: researchers as users of the infrastructure
- Also thinking about industry users, developers, etc.
- Educators are also users, e.g. of software tools [a related issue: "it's a great tool, but it takes me forever to train my students to use it – how about some video tutorials, easy training materials?"]
- Speakers of a wide range of languages, for infrastructures that involve language technology
- Community size can vary dramatically, and the types of activities to be undertaken accordingly

CHALLENGE: What are some challenges you've faced in community outreach, and how did you overcome them?

- Users who think about using an infrastructure but give up because it's too complicated – is there a way to identify that happening early in the process and prevent the user from leaving?
- Fragmented ecosystem – many different approaches, many different innovations, many of these not compatible with one another, no longer possible (in NLP realm) to get all the greatest hits into a single software platform
- Collecting artifacts to be used and for other people to use (getting buy-in from potential contributors – how do you make contributing valuable to them?)
- How to bring in users outside of core community groups? One strategy here would be to make infrastructure interface easy to use
- Usability, particularly of complex software, is a huge challenge, and an expensive one. Good software engineering is needed, and is often out of the scope of typical project budgets
- From the NLP perspective, challenge to extend projects to wider range of languages, and also to combat the ChatGPT hype
- If we want to get students engaged, need to build a sustainable student engagement pipeline, going beyond the student who will be lead author on the project
- Small research community, lack of responses from other academics

METRIC: How do you measure the impact and effectiveness of your community outreach efforts? What metrics or indicators do you track?

- Publications and citations
- Downloads, forks, etc.
- If there's a help desk as part of your infrastructure, this is a good way to identify users
- Possibly google analytics
- Sampling papers that cite the infrastructure (i.e. the relevant paper) to see in what ways the resource is cited

SUCCESS: Can you share an example of a successful community outreach activity, and what do you think contributed to its success?

- For long-term, sustainable interaction with communities, could establish undergrad summer programs, funding students to work on relevant research problems (this can also help with diversity), building long-term collaborations – perhaps through an REU grant? [but funding this is not so easy]
- Hack-a-thons, competitions, etc. can build high engagement, but they're short term (# of days)
- Learn about and do marketing!
- Workshops and tutorials can help to generate excitement and enthusiasm – through these workshops, create working groups for various aspects of the project (paid, in some cases)

- Weekly/biweekly open meetings, inviting the broader community to participate in discussions about topics of interest. This could be other researchers from academia, people from industry talking about their problems/issues/concerns (particularly the sort that could be (hopefully) addressed by the project)
- Publish papers, and help other researchers publish papers (for example, by releasing code even before publishing on the basis of that code)
- Infrastructure testing in educational settings (have students use the infrastructure and see what they can do!), and development of course materials using infrastructure. In some cases, then, this can lead to engagement to other levels of the community. (grad student developers serving as TAs for those courses). This also serves as a natural way to get undergraduate students engaged in research
- Similarly, project-based courses using APIs developed as part of infrastructure
- Identification of engaged users who are happy to give feedback and share wish lists, requirements, etc.

DIVERSITY: How can we ensure that underserved or marginalized communities are included and heard in the outreach process? What strategies can promote inclusivity?

- Training of users is important - valuable to have office hours - these need both funding and time
- There are marginalized communities that take part in data collection - we need to think of these communities as a key part of our research community, as key participants in the infrastructure
- Work with nonprofit organizations that support underserved communities, help with things like finding internships – a key thought is to work with existing foundations/organizations/etc. that are already involved in supporting such communities
- An important question to ask: what lives are impacted by the infrastructure? (e.g. speaker communities for NLP, residents for projects involving city planning, etc.) – and then engagement must include those lives and those communities?
- Another view: how can we make sure that the supported projects are doing good for the world, and not just making money?
- A challenge: building infrastructure that brings existing tools to previously underserved communities is not easy to get funding for – it's not easy to pose this as research
- Since we're talking about infrastructure, we need to be asking: "how will this project/infrastructure bring equitable benefits to society, and not only serve our existing research communities?"
- Hackathons in different regions of the world can help to build user communities – suggestion to hold competitions/etc., tutorials, etc. not only at the big international main conferences, but also at smaller regional conferences, which are more widely attended by local scholars, researchers, and students

TECHNOLOGY: How can technology and social media be leveraged to enhance community engagement? Can you talk about some strategies that have worked for you?

- Learn to use google analytics better
- Discord servers

WHAT ABOUT SUSTAINABILITY? How to keep engagement and use sustained once the infrastructure is no longer new and shiny?

- Once the grant funding is gone, and the infrastructure isn't as new and exciting, how to keep engagement going? This is a big problem, and generally there is a need for continued funding in order to support the infrastructure and its user base
- The problem: funding is needed for sustaining projects, but NSF generally wants to fund things that are new, transformative, innovative. How to resolve this conflict? Does it primarily mean just continuing to grow in scale?
- One example from NLP: grant funding supported open source development, once project was established, sought external investment, established a foundation, which sustains the project on a sort of shoestring budget