1. **What is your vision for the internet as a global public resource?***

Final Draft:

My vision for the Internet as a global public resource focuses on universal accessibility – irrespective of location, socioeconomic status, or language barriers. While global accessibility is improving, a significant language barrier prevents individuals from accessing information in their preferred languages. Ideally, everyone should have access to online resources in their language of choice. Access to reliable information is especially relevant given over 80 global elections this year. Already, generative AI is facilitating the spread of influential, misleading information. Coupled with digital platforms' incentive structures prioritizing short-term engagement over online safety, this undermines public trust in institutions and online information. The internet, once a vital information channel, is now flooded with hateful speech, spam, and manipulation, rendering raw information almost unusable. Various regulatory mechanisms, design, policy, and moderation solutions are being proposed to limit online harms, and it remains to be seen what combination of these shapes the future of the modern internet. I regard this challenge as one of the most critical issues leading into the next decade. In essence, my vision aims to transform the internet into a global public resource, that empowers individuals with accessible, accurate information in preferred languages to promote equality and drive positive social and economic change.

How would being a Mozilla Fellow help you to advance that vision?*

This fellowship allows me to pursue full-time work with civil society, aligning clearly with my career goals to advance technological solutions for nonprofits at various stages of operation. For example, I work with New York Public Radio, the nationally awarded Aadhar Sanstha in India, as well as a three-member fact-checking operation supported by Nest Mongolia. I do this as a co-founder at SimPPL, where I focus on building open-access responsible AI tools for nonprofits and newsrooms to improve trust on the social internet, alongside my full-time job as a Data Scientist. In two years, I've led teams that penned reports on election disinformation in India and Bangladesh, monitoring content on Meta, Twitter, and other platforms. We extended generative AI advancements to India and Bangladesh through Sakhi, our Bengali-speaking WhatsApp chatbot for public health, in collaboration with WaterAid Bangladesh, and are developing a Marathi and Hindi version in India. This fellowship comes at an inflection point in my career where I am hoping to move back to India, allowing me to work full-time with local organizations and mentor teams of students working on global projects through responsible

computing education programs funded by Google and Mozilla in India. Given my work in trust and safety aligns with Mozilla's vision for safe and responsible web and AI, I seek the fellowship's support to continue this impactful work with the community I have been part of.

Questions below this are to be reviewed

Please describe the problem you wish to address. In answering this question, please include the following: What do you see as the underlying causes of the problem? What strategies would you use to address this problem?* 1500 characters

Every day, more than 300 million women are experiencing their menstrual cycle. Many women and girls do not have the right hygiene information due to the absence of support from family and community, constrained education, and the stigma around this subject. A recent UNICEF study states that 71% of adolescent girls in India remain unaware of menstruation until they get their first period and 23 million girls drop out of school annually due to a lack of proper Menstrual Health Management (MHM) facilities. This includes the availability of sanitary pads and information about menstruation. There are initiatives like #KeepGirlsInSchool by Whisper and UNESCO that aim at improving MHM education for women and girls in India, however, it is extremely challenging to scale such physical interventions to large populations without significant investment of time and resources. I propose scaling literacy interventions using Large Language Models (LLM) to create an open-access, multi-lingual WhatsApp chatbot in partnership with local grassroots-level organizations, designed to generate accurate, verified responses based on knowledge from international health agencies. I aim to build a database of vectorized fact-checked documents and, for each user query, identify the most relevant documents using a similarity search.These selected documents are then fed to the multilingual LLM to ensure that the response is backed by fact-checked information, thereby minimizing hallucinations.

Why is this host organization(s) the most strongly aligned with your work? 800 characters

(Note: While you may select your preferred host organization, Mozilla will work with you and the host organizations to make final decisions.)

Society for Promoting Participative Ecosystem Management (SOPPECOM) is most strongly aligned with my work. SOPPECOM has established relationships with females in rural India working as farmers, agricultural wage laborers, and migrant workers under one organization to advocate for their rights. Often girls and females in these communities do not have access to necessary information in their preferred language or someone to talk to about women's health issues and are at the receiving end of suffering due to the social stigma and taboos around the subject. SOPPECOM's network with these females has the potential to become a primary channel to raise awareness about

MHM education and promote digital literacy to each of them about using interventions like chatbots to their advantage.

What are the key results you hope to achieve after 1.5-2 years? How do these results address the problem you described above? How will you evaluate progress and results? How will you integrate learnings into your approach?* 1200 characters

The potential impact of this chatbot is to reach 23 million schoolgirls and adolescents who are suffering from 'period poverty', describing a lack of access to accurate MHM information. My expectation is to reach at least 2500 users in the Pashan area of Maharashtra associated with SOPPECOM or organizations like Aadhar Sanstha we are currently working with to engage with the system. External metrics such as self-reported uptake of menstrual hygiene products and attendance of menstruating girls in school will help determine the behavioral change that this system drives. Along with collecting engagement data, and measuring user ratings, accuracy, and relevance of answers to improve the system, I will conduct interviews with system users to develop qualitative estimates of its performance and gaps. We have a prototype chatbot deployed in Bangladesh with WaterAid, leveraging their community relationships to ensure safe, reliable use and reduce adoption friction. This experience will inform the challenges and taboos we may face, especially in engaging girls and females in discussions.

How can your strategic intervention scale so that others in the country or region might benefit? What risks (external or internal), if any, may pose obstacles? What strategies do you plan to use to reduce these potential risks?* 800 characters

The project aims to develop an open-access multilingual WhatsApp chatbot catering to different regional languages in India that can be deployed in partnership with other organizations as well like Myna Mahila and Action India. Additionally, a chatbot is to be deployed on the WhatsApp platform for it to be extremely simple to chat with, in a medium familiar to nearly half a billion Indians who use the platform actively. Initially, scaling responses and reducing latency in concurrent chats may be challenging. Implementing a 20-message per 24-hour rate limit per user and engineering improvements for concurrent use can mitigate these issues. Additionally, safeguards need to be developed when users initiate off-topic or abusive language conversations.

How would your project/work benefit from feedback and input from Mozilla's interdisciplinary community?* 800 characters

Access to Mozilla's interdisciplinary community offers an opportunity to receive mentorship and guidance from Staff and Fellows at Mozilla, particularly in Generative AI and Large Language Models to tackle issues like lack of reliability around responses generated by the large language model underlying the chatbot. **In the future, additional features can be added to the bot such as speech-to-text to** avoid the barrier of the ability to read and write for these females, many of whom are not literate. This can benefit from the Mozilla initiative [Common Voice](#). The project will benefit from events like MozFest, where connecting with global scholars offers insights into regional MHM education gaps and cultural taboos, helping identify opportunities for impactful tech-based interventions.

What is a project you are proud of working on? Please provide the project URL*

Currently, I am leading a group of students and professionals at SimPPL to publish a report on gendered and political disinformation networks in Bangladesh in collaboration with the Tech Global Institute (TGI) - a global nonprofit led by ex-Meta leads in South Asia. The project is focused on how social media platforms particularly Facebook are used by political parties as a battleground in Bangladesh. In the first stage of the project, we analyzed nearly half a million content resulting in 98 million interactions on Facebook, to understand how political parties in Bangladesh are leveraging sophisticated information networks on social media to disseminate their messages ahead of the country's national election. Link to the report: https://techglobalinstitute.com/research/facebook-political-battleground-bangladesh/.

Currently, the project is in the near-completed second stage where the focus is on analyzing the content of the posts being shared. As part of this, we aim to investigate how mis- and-disinformation campaigns are carried out to corrupt the information ecosystem and sway public opinion on the electoral process, voter participation, and political discourse in Bangladesh and publish a report regarding the same to raise public awareness. In the final stage, we aim to study how this kind of campaign is carried out in a coordinated network and identify potential bad actors that can be reported to the Meta to improve platform regulation.

How did you contribute to that project and why are you proud of it?* 800 characters

In my role as a project team lead, I guided and mentored students on tools, data collection methodologies, and network analysis and contributed to framing research questions and finding

optimal ways to present information. I worked closely with TGI to explain our research methodology and findings and played a key role in drafting reports. Our aim is to provide Meta with insights for policy and intervention. Yet, platform restrictions alone cannot stop all these activities in favor of protecting freedom of speech and expression, necessitating digital literacy promotion. I am proud of this project because our first published report gained coverage in Bangladesh's largest daily newspaper, to educate people about coordinated activities on social media and how it can manipulate public opinion.

Please share an example of how you approach working openly (i.e. a project/ body of work that was both public and participatory by design).* 800 characters

I run a non-profit SimPPL - a student-led research collective where our mandate as the leadership is to work towards our mission via community-based participatory research. We empower students from the Global South to pursue top-tier research, present to external partners, and scale and deploy the technology securely for the audiences we serve. Students become mentees to learn Machine Learning, NLP, and Software Engineering, eventually transitioning into roles like Research Scientists, Interns, and Fellows to contribute to AI for social good. SimPPL creates a pathway for individuals facing social, economic, and gender-based constraints, limited access to computing resources, and long commutes creating a serious impediment to picking up practical skills often critical for employability.

Mozilla is especially interested in receiving applications from members of the Global Majority or Global South; Black, Indigenous, and other People of Color; women, transgender and/or gender diverse applicants; migrant and diasporic communities; and/or persons coming from climate displaced/impacted communities, (e.g. Most Affected People and Areas). If you would like to share any demographic information with us you have the option to in the following text field.

Why are we collecting this information?

We are interested in understanding more about your social identity to ensure equitable access and prioritize opportunities for all applicants. 800 characters

I am a first-generation graduate female from India. Having spent the initial 11 years of my life in a small village near Jamnagar, India I have experienced the taboo of discussion subjects about menstrual health in these societies. Bringing up this conversation in front of everyone was met with backlash simply because of the social taboo around the subject. Because of this, I am committed to making MHM information accessible to other girls like me through tools like Sakhi. This combined with the drive to use skills I have gained as a data scientist to develop impactful AI tools for Good work led me to apply for this Fellowship.

Is there anything else you'd like to share with us regarding your fellowship proposal? 800 characters

At SimPPL we have developed scalable real-world tools, such as Parrot, which analyzed hundreds of millions of tweets and identified 400k coordinated accounts reported to X/Twitter's Site Integrity leads in 2022. Meta granted us advanced access to upcoming datasets, acknowledging our reporting on coordinated pages in Bangladesh. Our Bengali WhatsApp chatbot Sakhi is going to be deployed for a pilot study with WaterAid Bangladesh. SimPPL will be featured on a second Google Cloud blog post, building on media mentions with Deutsche Welle, NYC Media Lab, Wikimedia, etc. We have presented our work at MIT, Oxford, Stanford, Twitter/X, Meta, etc. with awards totaling USD 150k from entities like Google, Mozilla, Amazon, Wikimedia Foundation, and Goethe Institut, led entirely by undergrads from India.

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