

Research at the ACT4D group, IIT Delhi

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The [Appropriate Computing Technologies for Development \(ACT4D\)](#) group is committed towards building and scaling tools for social development to benefit poor and marginalized citizens. We have achieved a lot over the years. Together with collaborators such as [Gram Vaani](#), which grew alongside and symbiotically with ACT4D, our work has touched several million people, over 200+ organizations and many government departments have used our tools, we have participated in policy consultations and impacted technology policy in the country and globally, and our efforts have been recognized widely as leaders in the space of ICTs for development. All of this work is further strongly validated through research and publications in leading conferences and journals.

This document is an effort towards laying down our values and motivations, so that more like-minded students and collaborators can join hands to work together for a better world.

What distinguishes research @ ACT4D?

- We do not work towards building/researching technology for **consumers**, i.e. those who can afford to pay. We work towards building tools for **citizens**, i.e. people with rights. Our goal is to empower citizens to get their rights and we are especially inclined towards those who have fewer avenues to claim their rights – typically those with lower income, marginalized on caste and gender lines.
- This means that we are closer to the **one-person-one-vote** democratic principle, rather than **one-dollar-one-vote** market principle. Democratic principles of equality, responsibility towards the weak, and to remove entrenched inequalities of power, is the lens that guides our selection of problems.
- This is important because otherwise technology typically is built for those who can afford it, and thus enables them to advance further, while increasing **inequality** and leaving the others to perpetually play catch-up. Clever innovations to benefit the poor through technologies built for the well-off is not as good as designing **for the poor and only for them** from the outset.
- For this reason, we form our ideas **bottom-up**, by meeting people and understanding their lives, rather than rely on others to frame problems worthy of research because such perspectives are typically clouded with agendas of the market or state which may not always be empowering for the poor. And we work hard to put our tools into operation – we work actively with **grassroots partners**, we empathize with the hard circumstances under which they work and strive to solve genuine problems, and we respect their **schedules**.
- To understand our philosophy more deeply, ask [me for a copy of my book](#) or take a look at shorter articles about it here: [Technology and \(Dis\)Empowerment: A Call to Technologists](#).

What kind of students are we looking for?

- Those who believe in the ACT4D principles above – for which they need to recognize their own **privileges** and be **empathetic** towards others who lack these advantages.
- Those who are **curious** about understanding how the world works because they feel that there is something wrong with the status quo and that it needs some **change**.

- Those who are inherently inquisitive and want to get into the **depths** of whatever they do – investigate patterns, understand what works, why, and enjoy explaining their findings to others.
- Those who are **disciplined and perseverant**. No amount of intelligence can substitute the need for consistent labour, hard work, and the self-confidence to solve problems.
- Those who are **accountable and responsible**, who understand that their work has significance and it matters to take it to completion.
- Those who are **team players**. All of our projects are done in large groups and require solidarity with others, respect for them, and to collaborate.
- And ideally those who are outdoorsy, who like to travel, meet people, and understand problems **first-hand** to get convinced about them.

What kind of students are we not looking for?

- Those who are motivated for other reasons, such as adding yet another project to their CV, or to get another degree, or to advance their careers.

What do we expect from PhD students?

In addition to of course defining your research area, understanding it in depth, producing high quality research, solving relevant problems, learning to write papers and give good presentations, being passionate about ACT4D priorities, and striving to be a leader and anchoring your own teams, it is also important to do the following:

- Understand **where your work fits** into the broader scheme of things. Read widely. Set up Google scholar alerts for topics of your key interest, know who are the leading people doing work in your area, which organizations to follow, read the latest news, write blogs – all this is essential to learn where to channel your labour so that it leads to **meaningful outcomes**.
- Be **rigorous** in your work. Your advisor will guide you and push you to bring out your very best, but ultimately the bulk of the effort is yours – it might appear tiring and frustrating but more often than not this is going to be essential for your growth and development.
- Plan out your thesis work by research output or chapter, and take each piece to a good conclusion that you can confidently talk about in depth. But do not take shortcuts or be in a hurry to graduate. You will know yourself when you are ready – the time when you are able to formulate problems on your own, execute them, and when you have matured to understand that the world is bigger than yourself and you know where you fit, you will discover that you have the confidence to **carve out your own space** in the world.

Remember that doing a PhD is a unique experience – never again in your life will you have the luxury to **completely immerse yourself in an area**, think about it day and night, even in your dreams, and consider and re-consider your assumptions – this experience will be invaluable in changing your outlook towards work and life.

What is the lab environment like?

- We work in **teams**. Each team works on multiple projects, but all the projects within teams and across teams fit together into a larger whole.

- We meet **each week** and share updates formally and discuss them rigorously. This is not only crucial to make continuous progress in the projects, it is also an essential skill to learn.
- The environment is much like a **startup**, with work motivated by real problems, but hard problems, and with **accountability** towards the partners we work with.
- We are lucky to have a **lab space** where we can work together. Use this opportunity!
- We publish mature works at top conferences and journals that understand the relevance of applied research in the social development context. **Pristine venues** such as ICTD, DEV, COMPASS, JCSS, CSCW, etc. have a vibrant community of passionate academics and practitioners who **transcend disciplinary boundaries** and work towards genuine empowerment of the marginalized. Importance is attached to (a) correctly framing a relevant problem and a practical solution approach, (b) methodological correctness, and (c) an evaluation in real world settings. We are not driven by labels such as A/A* publication venues, and rather believe that the work should find its own venue where it can lead to the greatest impact in terms of influencing change in the research community.

From where do we draw our energy?

- From one another of course, and additionally from research communities such as ICTD/DEV/COMPASS which believe in the same ideals, and from civil society and activists who understand that all technology sits within a political context and should be geared towards affecting the right political change.

What can you expect to get out of working @ ACT4D?

- A **wider perspective on life** – understand the diversity of circumstances that prevail in the world, what kind of impact technology has had on the lives of different people, and what opportunities exist to make the world a better place.
- **Fun while learning** – we are rigorous and disciplined with our work which helps us meet our goals, and this always brings cheer to us and our partners.
- **Lifelong friendships** – one of the perks of working in a team, learning to respect one another, and build solidarity.
- And of course, **technical details** of the area in which you work. Our methods span data science, machine learning, systems building, application design, user studies, content analysis, ethnographic analysis, and much more.