

Dipanjan Chakraborty

Curriculum Vitae

Education

- 2010– **PhD (thesis submitted) (converted from Masters in 2011)**, IIT, Delhi, CGPA – 8.33.
Information and Communication Technologies and Development
- 2010 **GATE (Graduate Aptitude Test in Engineering)**, 99.12 percentile, score: 666.
- 2006–2010 **Bachelor of Technology**, West Bengal University of Technology, Kolkata, CGPA – 8.39.
Information Technology
- 2006 **ISC–12th**, Indian School Certificate, Don Bosco School, Liluah, Howrah, 90.75%.
- 2004 **ICSE–10th**, Indian Certificate of Secondary Education, Don Bosco School, Liluah, Howrah, 90.20%.

Doctoral Thesis

- Title *Building ICT-Based Information Flows To Improve Citizen-Government Engagement*
- Supervisor Dr. Aaditeshwar Seth
- Description I identified broken and missing information flows between different stakeholders in an ecosystem of public social welfare schemes and public services. I built IVR (Interactive Voice Response) and Android tools which establishes information flows between the citizens and the government. Through these tools we are able to connect citizens to empowered civil society volunteers who are able to provide effective solutions to public grievances through their personal networks and through pressure building. The tools also communicate web-based scheme-related information to beneficiaries over automated voice calls and also get the information verified by the users. This information is otherwise inaccessible to most of the beneficiaries. The tools are also able to collect new information about the implementation of the welfare schemes from the community through unstructured and structured voice-based feedback tools. I have been able to develop technology skills like building interactive software tools to be used in the real world, Human-Machine Interaction skills to build interfaces customised for low-literacy and low-income users, and domain skills on the social welfare schemes implemented in India.

Publications

Peer-reviewed

- PhD **Dipanjan Chakraborty**, Mohd Sultan Ahmad, Aaditeshwar Seth. “Findings from a Civil Society Mediated and Technology Assisted Grievance Redressal Model in Rural India”. Ninth International Conference on Information and Communication Technologies and Development, (ICTD '17), 2017
- PhD **Dipanjan Chakraborty**, Aaditeshwar Seth. “Building citizen engagement into the implementation of welfare schemes in rural India”. Seventh International Conference on Information and Communication Technologies and Development, (ICTD '15), 2015

Room #114, ICTD Lab, Khosla School of IT
IIT Delhi, Hauz Khas, New Delhi – 110016, India

☎ (+91) 9711913881 • ✉ chakraborty.dipanjan@gmail.com

🌐 <http://www.cse.iitd.ac.in/~dipanjan>

- PhD Vivek Srinivasan, Vibhore Vardhan, Snigdha Kar, Siddhartha Asthana, Rajendran Narayanan, Pushpendra Singh, **Dipanjan Chakraborty**, Amarjeet Singh, Aaditeshwar Seth. "Airavat: An Automated System to Increase Transparency and Accountability in Social Welfare Schemes in India". Sixth International Conference on Information and Communication Technologies and Development: Notes Volume 2, (ICTD '13), 2013 [Short]
- PhD **Dipanjan Chakraborty**, Indrani Medhi, Edward Cutrell, William Thies. "Man Versus Machine: Evaluating IVR Versus a Live Operator for Phone Surveys in India". Third ACM Symposium on Computing for Development, (ACM DEV 3), 2013
- PhD **Dipanjan Chakraborty**, Aaditeshwar Seth. "A Participatory Video and Audio Platform for Community Interaction using DVDs and IVR Systems". Third ACM Symposium on Computing for Development, (ACM DEV 3), 2013 [Short]
- BTech Anirban Mukherjee, Sarbartha Sengupta, **Dipanjan Chakraborty**, Anirban Sen and Utpal Garain. "Text to Diagram Conversion: A Method for Formal Representation of Natural Language Geometry Problems". IASTED International Conference on Artificial Intelligence and Applications, (AIA 2013), 2013
- Non-peer-reviewed
- PhD Vivek Srinivasan, Rajendran Narayanan, Sai Chand Chintala, **Dipanjan Chakraborty**, Rajesh Veeraraghavan, Vibhore Vardhan. "Is There Such a Thing as a 'Direct' Cash Transfer?" CDDRL Working Papers, December, 2014

Impact

- UNDP Proposal to scale the volunteer-assisted grievance redressal model has been accepted for funding by UNDP.
- Ministry of Rural Development The Ministry of Rural Development, Government of India formed a committee involving us to design an IVR similar to ours to integrate into the NREGA MIS
- Grievance Redressal The volunteers participating in our grievance redressal pilot were able to resolve several difficult grievances which are usually ignored by the government helplines

Grants and Scholarships

- 2015 Google Pilot Research Grant, ₹500,000, "Using mobile phones to improve implementation of government schemes"
- 2015 Microsoft Research India Travel Grant, ₹50,000, to present at ICTD 2015
- 2013 Microsoft Research India Travel Grant, ₹75,000, to present at ICTD 2013
- 2011 Full scholarship to attend summer school at National University of Singapore
- 2010– GATE Scholarship for Masters and PhD

Experience

Post Doc

- 2017– **Post Doctoral Researcher**, *Gram Vaani (OnionDev)*, Delhi NCR.
Working on several projects like empowering community organisations with ICT tools, using Behaviour Change Communication over IVR to improve maternity health practices in rural Bihar and building a Business Intelligence analysis platform to monitor progress of projects

Internship

2012 **Research Intern**, *Microsoft Research India*, Bangalore.

Can automated phone calls be used in place of manual phone calls to collect user data from low income and low education users? With a little loss of accuracy and speed, it can be done with lower costs

Teaching Assistant

2010– **Teaching Assistant**, *IIT Delhi*, Worked as a teaching assistant for various basic and advanced courses at IIT Delhi.

Awarded *Outstanding Teaching Assistant Award* for contribution as the Head TA for the course *Introduction to Computer Science* in 2015

In the News

2014 **Times of India**, *IIT students work on system to check govt claims*, <http://bit.ly/2r1MoBp>.

Other Projects

Tools to build interactive TV-DVDs as a means of improving awareness among marginalised communities

Interactive implementation of the RSA cryptography algorithm at the annual Technical Festival of RCCIIT in 2007. It won the first prize

User authentication using typing pattern on a keyboard

Identifying focussed named-entities from pieces of texts

Web-based road navigation system for the IIT Delhi campus

Multi-player, multi-threaded, networked ping-pong game

Image-compression and face-detection using PCA

Other skills

Languages Read, speak and write English, Bengali and Hindi

Expertise I bring together computer engineering and field experience. I have built software tools and travelled, deployed and tested them, along with conducting user interviews, in rural Telangana, Goa, Haryana, Jharkhand, Bihar and Madhya Pradesh, for my research

Computers Linux, Android, Perl, Python, Java, C, Asterisk, Free Switch

Activities

Co-curricular

2007 A founder member of the Linux Users' Group (LUG) in RCCIIT (under graduate college)

2009 Manned the IOTA (Institute for Open Technology and Applications) stall at the Kolkata Book Fair

2008 Was a trainer at the School Teachers' Computer-Training Programme at West Bengal State University, Barasat, West Bengal, as a part of IOTA and ilug-cal.org

2008 Manned the Fedora booth at the Science City, Kolkata, during the IOTA convention on 'Freedom in Computer Technology'

Literary

Original stories were published in the Voices, a supplementary of The Statesman newspaper

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Satirical pieces published in the satire portal Faking News

Awards, Competitions and Achievements

- 2009 Obtained 96 percentile in 5th National IT Aptitude Test conducted by NIIT
- 2008 Adjudged First in Paper Presentation and Second in the Coding Competition in the annual Technical Festival of RCCIIT
- 2007 Adjudged First in the Model Making Competition, Second in the Coding Competition, Second in Paper Presentation, Joint Third in One Minute Speech Competition in the annual Technical Festival of RCCIIT
- 2006 Obtained 100% marks in mathematics in 12th standard school board examinations

References

1. Dr. Aaditeshwar Seth
(PhD supervisor)
Associate Professor
Department of Computer Science and Engineering, IIT Delhi
aseth@cse.iitd.ac.in
2. Dr. Bill Thies
(Internship Supervisor)
Senior Researcher, Microsoft Research India
thies@microsoft.com
3. Dr. Indrani Medhi Thies
(Internship Collaborator)
Researcher, Microsoft Research India
indranim@microsoft.com