Sayamindu Dasgupta

Address:	22 Magazine St, Apt #1,
	Cambridge, Massachussets – 02139, USA
Phone:	+1 617 586 6528
Email:	sayamindu@media.mit.edu, sdg1@mit.edu
Web:	http://www.media.mit.edu/~sdg1

Research Interests

Technology in Learning, Human Computer Interaction, Social Computing, Online Communities.

Education

- SM in Media Arts and Sciences, Massachusetts Institute of Technology, 2012 *(expected)*.

- BTech in Computer Science & Engineering, West Bengal University of Technology, 2008.

Publications

- Dasgupta, Sayamindu. *Interactive Ebooks: Experiments on the OLPC XO-1 Bookreading System, Proceedings of International conference on 'Designing for children' with focus on 'play + learn'*, co-organized by Industrial Design Centre (IDC), Indian Institute of Technology (IIT) Bombay. Feb. 2010..

- Dasgupta, Sayamindu. *Converting a legacy ASCII based Indic font to an Unicode compliant Open Type Font.* Part of work done for the *FLOSS Fellowship Program* of SARAI/Center for the Study of Developing Societies, New Delhi. Jun. 2004.

- Articles for both print and web magazines/publications such as *LWN.net*, *Python Magazine*, *Linux for You*, *GNOME Journal*, *PCQuest*, *Linux Documentation Project*, etc.

Conferences & Invited Workshops

- Dec. 2009 : Reading, Discovering, Sharing eBooks, inaugural talk at FOSS.IN 2009, Bangalore (one of the largest annual FOSS events in Asia).

- Aug. 2009 : Workshop on Institutional Repositories, Centre for the Study of Culture and Society, Bangalore.

- Feb. 2007 : Presentation on Indic Support in GNU/Linux, with Special Emphasis on Indic Fonts at Digitable Texts in Editable Format, School of Cultural Texts and Records, Jadavpur University, Kolkata.

- Aug. 2003 : Presentation on Localization of Free Software - Challenges and Possibilities at GNU/Linux in Education and e-governance, Forum of Scientists, Engineers and Technologists, Jadavpur University, Kolkata.

- Apart from the above, I regularly speak, facilitate and participate in conferences and workshops in different parts of the world and India. Some of them include *FOSS.in* (Bangalore), *Freed.in* (New Delhi), *GUADEC* (Birmingham, UK), *Asia Source II* (Sukabumi, Indonesia), *Gnunify* (Pune), etc.

Work Experience

Jul. 2010 - Present | **Research Assistant :** MIT Media Lab

- Working with the Lifelong Kindergarten research group on the next generation of Scratch, and the website built up around the Scratch user community. Scratch is a visual, "block based" programming language that makes it easy to create and share (via the website) one's own interactive stories, animations, games, music, and art.

Oct. 2007 - Jun. 2010 | **Independent Contractor :** One Laptop Per Child Association Inc.

- Assigned to the software development and engineering aspects of the *Million Ebooks* sub-project of OLPC. From a simple GUI wrapper around a PDF rendering library, I turned Sugar's Read Activity into a full featured ebook reader, with support for bookmarks, notes, etc. Also implemented support for the industry standard EPUB ebook format and the Open Publication Distribution System (OPDS) catalog system as a part of a collaboration between OLPC and the Internet Archive.

- Responsible for all local language support (*internationalization/localization*) aspects of OLPC, including developing various relevant components in Sugar, translator community building, implementing translation work-flow, keyboard layout design, etc. Helped a team of volunteers translate more than 80% of the OLPC software into more than 19 different languages in little over seven months. The translation infrastructure and workflow has also been used by related third-party projects such as Etoys and Scratch.

May. 2007 - Aug. 2007 | **Student Developer :** Google Summer of Code/GNOME Foundation

- Worked on enhancing the lockdown and deployment capabilities of the GNOME Desktop Environment under the guidance of Federico Mena Quintero (co-founder of the GNOME project). Gained exposure to the internal workings of the Nautilus file-manager, GTK+ toolkit and Sabayon (a system administration tool to manage GNOME desktop settings).

Mar. 2007 - May. 2007 | **Independent Contractor :** UNESCO

- Under the framework of the Japanese Funds-in-Trust project *Training and Profession Development of Teacher Educators in the Effective use of ICTs for Improved Teaching and Learning*, worked on tutorials explaining the installation of over 50 Free/Open Source web based applications that can be used by teachers to enhance teaching and learning and by educators and administrators to improve productivity and efficiency.

Jul. 2006 - Sep. 2006 | **Trainee :** Red Hat India Pvt. Ltd.

- As part of collating and developing a FOSS stack for video based distant education, developed *Hippopotamus*, a Gstreamer/GTK+ based Icecast source client capable of capturing and streaming Ogg/Theora video.

Jun. 2005 - Sep. 2007 | **Volunteer Developer :** L2C2 Technologies

- Worked on *Senpai* – a Learning Management System/Stack, comprising of FOSS components, and a content delivery application based on GTK+, Gstreamer/Xine and Gecko.

- Gained familiarity with deployment and management techniques for Linux Terminal Server Project (LTSP) while investigating affordable, low power hardware solutions for computer laboratories and libraries in educational institutions.

Work Experience (cont...)

Jun. 2003 - Dec. 2003	**Independent Contractor :** Red Hat India Pvt. Ltd.

- Provided internationalization support related to Bengali (India) Software Engineering and QA for Pango and other GNOME technologies.

Jan. 2003 - Present	**Co-founder/Volunteer Developer :** AnkurBangla project

- Coordinated the Bengali GNOME translation sub-project for over a year. Contributed several patches to fix/enhance Bengali rendering for the Pango font rendering engine. Also implemented support for Bengali in GNOME components like Dasher (accessibility tool), etc.
- Coordinated the Font Development sub-project for two years. Developed one of the world's first Unicode Compliant Bengali OpenType fonts called *Akaash* (আকাশ).
- Current coordinator of the OpenOffice.org Bengali native language project. Contributed fixes for Bengali rendering in ICU, the internationalization framework used by OpenOffice.org.

–	**Other professional and voluntary activities**

- Maintainer/developer of two core Sugar Activities – ImageViewer and Terminal. Ported the FBReader ebook-reader to work as a native Sugar Activity.
- Open hardware enthusiast, and have built simple sensors, etc with Arduino. Extended the TurtleArt activity in Sugar to support programming Arduino boards and was also involved in porting and testing Sugar's Measure activity to the OLPC XO 1.5 hardware.
- Contributed several enhancements/patches for various Free/Open Source software projects (Sugar, Sabayon, Exaile, Translate Toolkit, etc).
- Maintainer/developer of Python bindings for Hunspell (spell checker and morphological analyzer) and libxklavier (library to manipulate X keyboard settings).
- Mentored a student under the project Translate Toolkit and Pootle during Google Summer of Code 2008.
- Created a number of GNU/Linux live-CDs to showcase various software and technologies (Koha integrated library system, Bengali localization, etc).

Computer Skills

- **Languages:** ﹕Python, ﹕C, :C++, :Bash, .Scheme, :PHP, .Java, .LATEX
- **Web Languages:** ﹕XHTML, ﹕CSS, :XML, :HTML5, :SQL, .Javascript
- **Libraries:** ﹕GTK+, ﹕GObject, :Cairo, :libc, :GStreamer, :D-Bus, .Xlib
- **Developer Tools:** :SVN, :Trac, :Bugzilla, :Autotools, :GCC, :Make, :GDB, :GIT, :CVS

| **Legend:** ﹕expert, :proficient, .familiar

Last Updated: August 25, 2010