BURCH FELLOW 2012

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# TECHNOLOGY & HEALTHCARE: DEVELOPING MOBILE APPLICATIONS FOR RURAL CLINICS IN INDIA

I set out on a journey this past summer to explore rural health care and obtain real world experience developing applications for mobile devices. However, I explored much more during my Burch Fellowship and my most memorable moments were in the personal friendships and relationships I built.

India

Hyderabad

I arrived in Hyderabad, India in late May 2012 and immediately got to work at the CARE Hospital central office. I worked on two Android applications, or apps, over the course of the summer: a Primary care app for the first half of the summer and an Insurance app for the second half of the summer. For the first app, I met primarily with the doctors and the village health workers to gather all their requirements for the apps. This allowed me to get a better picture of what the app should entail. In addition, I met with the doctor that worked at CARE to plan what type of indicators were currently being written down for each patient and the newer indicators that should be

included in the new Android app. After gathering the requirements of all the indicators and determining the format in which they should be presented, I spent most of the next few weeks attempting to code the app. There was a consistent process of app creation and presentation of the app to the village health workers for feedback. Four weeks into the summer, the Primary care app was mostly complete.

As an addition to the Primary app, CARE was rolling out a new micro-health insurance program for the insured residents in the covered villages. Villagers paid a yearly fee and then received free service in the clinics and highly subsidized rates for big budget operations. My main task was to create the technological framework for the insurance collection service. I had to create the front end application

for the users to quickly enter in their bio data and have this data sent to a database from where the insurance company would be able to make insurance cards and then distribute the cards to the villagers. The process of planning the particulars of this structure took basically the rest of my stay in Hyderabad, and it was a hectic last couple of weeks. I met with executives of insurance companies as well as some of the department heads at the hospital to make sure the program would be set up in a reliable manner. It provided me with great exposure on how much planning and effort goes into starting a large scale program. It was a good feeling having it done.

When I was not coding or working with health workers, I helped with the telemedicine operations that took place when a gynecologist had weekly sessions with female villagers who had health issues. I was able to take note of their sessions to get a better grasp of what medical problems female villagers were facing. That was a great learning experience and it taught me how a doctor can explain very complicated and complex issues to the villagers in an understandable manner. While I have no interest whatsoever to become a gynecologist, I learned a lot about women's health and the problems these rural women faced on a daily basis.

At the central office, there were many other interns from other places in Andhra Pradesh as well from the U.S. We worked together on some projects and enjoyed the time we

spent together outside the office. Whether it was getting lunch during the workdays or going to the mall over the weekends, I always had a ready group to go with. The employees at CARE treated me like family and it helped a great deal that I knew Telugu. I will never forget the long conversations I had with some of them or when I was asked to give a small party on the Fourth of July to celebrate the American independence.

I was quite nervous at the beginning of last summer about venturing into urban India alone, but I came out more confident and willing to try new things. I am grateful for my Burch Fellowship experience, because it helped me see how my interests in both computer science and public health could be combined to make a tangible difference in the world. I saw how technology could bring healthcare to the most remote of areas. Hearing about this process on the news is one thing, but seeing it happen in front of me was a life changing experience. I left India

with a wealth of knowledge and new friendships that will help me in the future whether I pursue a career in technology or medicine.