Hariharan Subramonyam

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SUMMER INTERNSHIP - 2016

EDUCATION

1st Year Ph.D Student - Data Visualization Research
Advisors: Eytan Adar, Sile O'Modhrain
University of Michigan - School of Information
Ann Arbor, Michigan

Master of Science - Information (April 2015)
Human Computer Interaction
University of Michigan - School of Information
Ann Arbor, Michigan
[GPA : 3.9/4]

Bachelor of Engineering (July 2008)
Telecommunication
CMR Institute of Technology - VTU
Bangalore, India

WORK EXPERIENCE

Interactive Intelligence Lab - Xerox PARC
Research Intern
Collaborators: Anusha Venkatakrishnan, Michael Youngblood, and Peter Pirolli
(June 2015 - August 2015)

University of Michigan - School of Information
Graduate Student Research Assistant
Faculty Advisors: Paul Resnick, and Eytan Adar
(October 2013 - Present)

Symphony Teleca
Senior Engineer - Product Development
Consultant for the R & D team - Schneider Electric
(December 2011 - July 2013)

SunGard
UX Specialist, UI Framework Developer - WPF
(July 2008 - December 2011)

RESEARCH

- **Personal Data Viz** - Research on understanding the phenomenology behind personal data visualizations in order to formulate a process for participatory data analysis(PDA) and also build visualization tools to support PDA.

- **Sprout Viz** - Workinig on an augmented reading experience using the HP Sprout to display realtime text based visualizations to support visual learning.

- **Florum** - Information Visualization project to create graphical representations of comments in discussion forums. Built the web interface using joint.js and in the process of running tests on Amazon mechanical turk. [www.florum.org]

- **MTogether** - Involved in the process of building a social media research platform to facilitate the study of user behavior across social networks. Built the service infrastructure using Google app engine, and developed Chrome extensions to collect user data. [www.mtogether.us]

- **Foodscapes** - Personal health research in collaboration with Xerox PARC to construct an ontology of factors that influence food choices and design interventions through ambient data visualizations and visual self reports.

- **Paper Computing and Visualizations** - Exploring ways to create interactive visualizations using paper computing circuitry and sensors.

SKILLS

Research and Design
Contextual Inquiry, Wireframes, Storyboards, Prototyping (Software & Hardware), Participatory/Inclusive Design, Ethnography, Participant Observation, Surveys, Usability Testing, Heuristic Evalution, Comparative Analysis.

Software and Systems
HTML, CSS, JQuery, D3.js, Chrome APIs, Microsoft .Net, ASP .NET MVC, C#, Python, XAML, Processing, Kinect Programming, Arduino Programming, Axure.

Relevant Coursework

- Application Oriented Research in HCI
- Information Visualization
- Interaction Design
- Personal Informatics Design
- Advanced Projects and Social Computing
- A Dialog of the Senses
- Movement Based Interaction Design

DESIGN PROJECTS

Magic Mirror - Embodied Interaction Design (Nov - Dec, 2014)
Magic Mirror is a novel approach to interact with fitness data. Designed and built a whole-body interaction system using the kinect sensor, to display body data from a fitness tracking device, realtime, onto a life size mirror display. Developed a python based service which queries for fitness data over web APIs, and communicates via OSC(Open Sound Control) to an application written in Touch Designer.
Subramonyam, H. (2015, April). SIGCHI: Magic Mirror-Embodied Interactions for the Quantified Self. In Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (pp. 1699-1704). ACM.

Rice Paper - Enabling Context for Traditional Chinese Paintings (September - Dec, 2014)
This project helps bridge the cultural disconnect between the creators of traditional Chinese paintings, guohua, and non-Chinese viewers. We conducted extensive user research, and through participatory design approach, prototyped an iPad application to facilitate sharing of large quantities of artistic context for traditional Chinese paintings in the form of tangible, printed booklets. Using concepts from book design and Information Architecture, we created the printed booklets.
Subramonyam, H., Shen, Y., & Jones, S. L. (2015, April). SIGCHI: Enabling Context for Traditional Chinese Paintings with Rice Paper. In Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (pp. 49-54). ACM.

Molecules - An Olfactory Interaction Design Concept (Oct- Dec, 2014)
Molecules is an olfactory design approach to search, filter and categorize photos. This is an example of reflective interfaces, in which technology is the background of social interactions, and the interactions focus on reflection and mental rest. It consists of an app that lets users tag photos based on scents, which then gets uploaded to the cloud. A coffee table like installation, projects the photos on its surface when triggered by a smart scent atomizer (molecule). The atomizer communicates wirelessly with the coffee table, sending it information about the name of the fragrance.

Yelp Data Visualization (Nov - Dec, 2014)
This project visualizes restaurant review data from Yelp. Using the Yelp Academic Dataset and D3, we built a dashboard for restaurant managers to make meaningful inferences about their business and customer satisfaction. Through text processing and sentiment analysis of reviews, we built an interactive dashboard to visualize food quality, service and physical environment.

Buena Vision (Jan - April, 2014)
This is a personal informatics project that helps computer users monitor their usage, in order to bring about behavior changes to prevent Computer Vision Syndrome (CVS). We interviewed computer users,opthamologists and optometrists to learn about usage behavior, eye conditions, preventitive measures and failures to adhere to these measures. By applying the SWITCH framework, we designed and prototyped a measurement strategy which involves a wearable smart glass fitted with gyroscope, proximity and light sensors, and mobile and desktop applications that records, reports and recommends behavior changes.

Ozone House - Contextual Inquiry (Sept - Dec,2013)
Ozone house is a community-based, nonprofit agency that helps young people lead safe, healthy and productive lives through intervention and prevention services. In this project, we worked with the staff at Ozone House to analyze their client workflow in order to identify any inefficiencies or problem areas in the collection and dissemination of data, and also made recommendations for improvement.

More projects at www.haridecoded.com.

SELECTED AWARDS

- 3rd Place in CHI 2015 Student Design Competition
- Graduated with Highest Distinction - Telecommunication Engineering (2008)
- Two times Kudos recipient for quality and creativity - SUNGARD (2011,2012)
- Design Award - Schneider Electric (2013)
- Winner: Shure Design Jam - Collaborative work spaces