

GAURAV PARUTHI

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RESEARCH INTERESTS

HCI, Design, UbiComp, IOT, AI/ML, Data Science and ICTD

EDUCATION

Ph.D. Information Science *Fall 2011- Present*
University of Michigan, Ann Arbor, MI
Graduate Certificate in Computational Discovery and Engineering *Winter 2015*
B.E.(Honors) Electrical and Electronic Engineering *Fall 2005-2009*
Birla Institute of Technology and Science, Pilani, India

PROFESSIONAL EXPERIENCE

Graduate Student Research Assistant, University of Michigan *Fall 2011 - Winter 2017*
My work centers around building context-aware applications for health.

Chief Technology Officer, Sophus Inc. *2016*

Graduate Student Instructor, University of Michigan
Pervasive Interaction Design *Winter 2014, Fall 2015*
Networked Computing: Storage, Communication, and Processing *Fall 2013*
Complex Web Design *Winter 2016*

Research Internships

- IDEO CoLab Fellowship *Summer 2017*
- PARC, Palo Alto, California *Summer 2015*
- Telefonica Research, Madrid, Spain *Summer 2013*
- Elab, INSEAD, Singapore *Fall 2008*
- Yahoo! Research, Bangalore, India *Summer 2008*

Research Developer, Microsoft Research *2009 - 2011*

SELECTED PUBLICATIONS

(Under Review) Paruthi G., Raj S., Colabianchi N., Klasnja P., Newman M., **Finding the Sweet Spot(s): Understanding Context to Support Physical Activity Plans**

Paruthi G., Raj S., Gupta A., Huang C., Chang Y., Newman M., **HEED: Situated and Distributed Interactive Devices for Self-Reporting** *UbiComp'17*

Chang. Y., Paruthi G., Hsin-Ying W., Hsin-Yu L., Newman M., **An Investigation of Using Mobile and Situated Crowdsourcing to Collect Annotated Travel Activity Data in Real-Word Settings.** *International Journal of Human-Computer Studies 2016*

Paruthi G., Frias-Martinez E., Frias-Martinez V. **Peer-to-Peer Microlending Platforms: Characterization of Online Traits** *Presented at 2016 IEEE International Conference on Big Data in Washington D.C.*

Chang Y., Paruthi G., Newman M. **Challenges in using wearable cameras and phone logs to generate ground truth of transportation activities** *in UbiComp'15*

Dong T., Ackerman M., Newman M., Paruthi G., **Social Overlays: Collectively Making Websites More Usable,** *in Proceeding - INTERACT '13*

Ittan S., Paruthi G., Thies W., **Mapping Large Educational Websites to Interactive DVDs,** *in International Conference on Technology for Education 2012 - T4E '12*

Paruthi G., Thies W., **Utilizing DVD players as low cost offline Internet Browsers** *in Proceedings of ACM Conference on Human Factors in Computing Systems - CHI '11 Best of CHI Honorable Mention*

Gaikwad K., Paruthi G., Thies W., **Interactive DVD as a Platform for Education** *in Proceedings of the Int. Conf. on Information and Communication Technologies and Development, London - ICTD '10*

SELECTED PROJECTS

Designing context-aware systems for Behavior Change Applications

My research proposes the notion of "sweet spots", as a unified representation of converging factors. The proposed computational representation provides a novel and useful perspective to (a) better understand the nature of physical activity planning and execution, (b) bridge the gap between phenomenological and positivist perspectives of context to allow for computational support.

Sophus- hyperlocal knowledge sharing platform

Sophus is a mobile application that helps users get their questions answered by the local community. It is a location-based question and answer platform that crowdsources answers and displays the most relevant questions for users based on their interests, background, and location.

The Role of Rating and Loan Characteristics in Online Microfunding Behaviors

In-depth data analysis of a micro-lending platform focussing on three important features: ratings of the micro-finance institutions, loan characteristics and lending teams. Results show that lenders appear to lend more to highly rated institutions, and with what appears to be better planned lending decisions; and that smaller, homogeneous teams seem to drive more lending activity and to achieve larger team lending agreements.

SKILLS

Programming: Python, C/C++, Javascript, Swift, Matlab, SQL

Frameworks: Git, RiotJS, Flask, Redis, MongoDB

Machine Learning Techniques: Tensorflow, Classification - decision trees, SVM, HMM, etc.; Time-Series Forecasting - ARIMA, Holt Winters; Clustering - K-means, EM

Data Science: Python, Pandas, R, Hadoop, D3.js

Usability and Design: Experimental design, user interviews, user enactments, surveys, paper prototypes, journey maps, A/B test

Hardware Prototyping: Arduino, Raspberry PI, Photon, nrf51822

LEADERSHIP ACTIVITIES

Student Coordinator , ICTD Research Group - GRID, University of Michigan	<i>Fall 2011 - Fall 2013</i>
Founding & Nucleus Member , Center for Software Development, BITS Pilani	<i>2006-2009</i>
Founding Member Linux Users Group, BITS Pilani, Goa	<i>2008</i>
Member of Student Organizing Committee International Workshop of Biosensors	<i>2006</i>

AWARDS AND HONORS

Top 1% IDEO CoLAB 2017 Summer Fellowship	<i>2017</i>
First , Exposition, School of Information, University of Michigan	<i>2013, 2016</i>
First , Kaggle Competition for the Course SI-721 Data Mining,	<i>2012</i>
First , ICTD'12 Full Scholarship,	<i>2012</i>
National Finalist , for Google Product Prodigy,	<i>2009</i>
First Prize , CSC Innovation Icon,	<i>2008</i>
National First Runner-Up , in Microsofts Imagine Cup, in Software Design, Out of 4000 Teams.	<i>2007</i>
First , International Online Hacking Contest (IOHC),	<i>2008</i>
First , Binary Pirates, Indias first Capture the flag hacking contest, Quark	<i>2008</i>

OTHER ACTIVITIES

Webmaster, Human Computer Interaction Consortium (HCIC) 2013 - 2016, Interaction Ecologies Group, University of Michigan Jan 2014 - present

Reviewer, ACM IMWUT, 2017, ACM CHI 2015, 2016, 2017, ACM CSCW 2013, ACM ICTD 2013

Student Volunteer, ACM CSCW 2014, ACM CHI 2014