

Sabirat Rubya

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Education

- PhD in Computer Science (In progress), September 2015 - present, [University of Minnesota, Twin Cities](#)
Advisor: Dr. Svetlana Yarosh
Research Group: GroupLens Research
- B.Sc. Engineering in Computer Science & Engineering (Graduated in 2012), Bangladesh University of Engineering and Technology

Research Summary

My research focuses on recommending and designing technology for users of online peer support health communities. I am investigating online communities for recovery from substance use disorders to understand how these community members maintain strong tie relationships and enact privacy in the peer support process. Currently I am working on developing a self-updating global list of AA meetings using a combination of information retrieval and human computation techniques. Throughout my research work I have developed a broad set of skills and sensitivities including working with stigmatized and sensitive populations, mixed-methods approaches, and system-building blending state-of-the-art approaches from multiple technical areas.

Publications

Journal Articles:

- [J2] "Interpretations of Online Anonymity in Alcoholics Anonymous and Narcotics Anonymous"
Sabirat Rubya and Svetlana Yarosh. PACM on Human-Computer Interaction, Vol. 1, No. 2, Article 91.
Publication date: November 2017.
- [J1] "Genetic Approach for a Flexible Cell Phone Keypad with Reduced Keystrokes and Key Jamming for Better Human Technology Interaction"
Sabirat Rubya, Samiul Monir and Hasan Shahid Ferdous. The Journal of Multimedia (Academy Publishers), 2012, Vol. 7, No. 5, pp 341-352.

Conference Publications:

- [C4] "Video-Mediated Peer Support in an Online Community for Recovery from Substance Use Disorders"
Sabirat Rubya and Svetlana Yarosh. In proceedings the 20th ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW 2017) [Acceptance Rate: 35%]
- [C3] "Rotation and Scale Invariant Posture Recognition using Microsoft Kinect Skeletal Tracking Feature"
Samiul Monir, **Sabirat Rubya**, Hasan Shahid Ferdous, in proceedings of the 12th International Conference on Intelligent Systems Design and Applications (ISDA- 2012).
- [C2] "SS-ADC: Scatter Search with Adaptive Diversity Control"
Sabirat Rubya, Samiul Monir, Mahfuza Sharmin, Mohammad S. Alam, Mohammad S. Rahman. In proceedings of the 7th International Conference on Electrical and Computer Engineering (ICECE- 2012).
- [C1] "A Flexible Keypad Reducing Keystrokes and Key Jamming for Cell Phones"
Sabirat Rubya, Samiul Monir, Hasan Shahid Ferdous. In proceedings of the International Conference on Computer and Information Technology (ICCIT- 2011).

Others (Workshop papers, Posters, Demos, etc.):

- [W6] "Conducting Research with People in Recovery from Substance Use Disorders"
Sabirat Rubya. CSCW 2018 Workshop on Conducting Research with Stigmatized Populations
- [W5] "Risk "attention" or "adventure": A Qualitative Study of Novelty and Familiarity in Music Listening"
Vikas Kumar, **Sabirat Rubya**, Joseph Konstan, and Loren Terveen. Joint Workshop on Interfaces and Human Decision Making for Recommender Systems, IntRS @RecSys 2018
- [W4] "Facilitating Peer Support for Recovery from Substance Use Disorders"
Sabirat Rubya. **1st place** in Student Research Competition in Graduate category, Extended Abstracts on Human Factors in Computing Systems (CHI EA '17). [Acceptance Rate: 20%]
- [W3] "ShareTable Application for HP Sprout"

Baris Unver, Sarah A. McRoberts, **Sabirat Rubya**, Haiwei Ma, Zuoyi Zhang, and Svetlana Yarosh. In Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '16). [Acceptance Rate: 20%]

[W2] “Design Implication for a Customized Smartphone File Explorer from User Feedback”

Sabirat Rubya and Syed Ishtiaque Ahmed. In Proceedings of the 4th Annual Symposium on Computing for Development (ACM DEV, 2013). [Acceptance Rate: 33%]

[W1] “Parent-child Facebook Friendship: an Actuator for Generation Gap”

Samiul Monir, **Sabirat Rubya**, Hasan Shahid Ferdous. In Proceedings of the Workshop on Human and Technology (WHAT), co-located with the 16th International Conference on Computer and Information Technology (ICCIT-2013).

Research Experience

- **Graduate Research Assistant**, GroupLens Research at UMN, September 2015-present

Research Projects:

1. Self-updating AA Meeting List using Machine Learning and Crowdsourcing
 - Collected AA meeting information from different local AA websites
 - Designed algorithms to detect meeting pages/meetings using machine learning and pattern detection
 - Developed an interface for crowd-workers to validate the meetings
2. Understanding Interpretations of Online Anonymity in an Online Recovery Community
 - Conducted secondary analysis of data from two interview studies
 - Conducted statistical analyses on data from questionnaire and scraping
 - Found out how AA and NA members interpret and enact online anonymity
3. Understanding Video-mediated peer support in an Online Recovery Community
 - Designed and validated an interview protocol for analysis of an online recovery community
 - Conducted semi-structured interviews with influential members of the community (intherooms.com)
 - Analyzed data from scraped data, survey and interviews
 - Found out major tensions in video-mediated peer support

- **Undergraduate Research Assistant**, HTI Lab, BUET (March 2011-November 2012)

Teaching Experience

- **Visiting Instructor**, Mathematics, Statistics, and Computer Science Department at Macalester College (Spring 2019)

- **Graduate Teaching Assistant**, Department of Computer Science and Engineering at the University of Minnesota, Twin Cities

Fall 2017 (September 2017-December 2017) for CSCI 5117: Developing the Interactive Web

- Helped designing course projects on cutting-edge web technologies (e.g., Express, React, React Native, etc.)
- Held office hours, and graded assignments

Fall 2015 (September 2015-December 2015) for CSCI 5115: User Interface Design, Implementation, and Evaluation

- Prepared and delivered a lecture on some topics of mobile application development
- Held office hours, graded assignments and exams, wrote code using Google App Script for automating the process of team assignment to critique and collection of usefulness score of those critiques

- **Part time Lecturer**, Department of Computer Science and Engineering at Bangladesh University of Engineering and Technology, November 2013 to April 2014

- Courses Taught: Operating Systems, Compiler, Technical Writing, Information Systems Design

- **Lecturer**, Department of Computer Science and Engineering at United International University, June 2012 to present

- Courses Taught: Structured Programming Languages, Data Structures, Operating Systems

Industry Experience

- **Android Application Developer** at Prolog Inc. Bangladesh, April 2011 to May 2012

- Developed projects for clients remotely

Related Skills

- Programming Languages: Python, C, C++, Java, Python, HTML, CSS, JavaScript
- Framework: Express, Hexo, NodeJS, Flask, Joomla
- Database: MySQL, SQLite, MongoDB
- Analysis: Grounded Theory Method, Semi-structured Interviewing
- Other: Native Android App Development

Service

- Webmaster: grouplens.org (September 2018-present), hcic.org (2017-present)
- Reviewer: CHI 2019, CHI 2018 LBW, PACM on HCI (November 2017), SKIMA 2014 (December 2014)
- Secretary, Bangladeshi Student Association, University of Minnesota (Sept 2017-August 2018)
- Jury Board Member, EATL-Prothom Alo Mobile Apps Contest 2014 (February 2014)
- Mentor, National Mobile Application Awareness & Capacity Building Program (August 2013)

Awards, Honors, Grants

- 1st Place, CHI 2017 Student Research Competition (Graduate Category)
- University of Minnesota College of Science and Engineering Graduate Fellowship (Fall 2015)
- CodeCrafters-Investortools Research Travel Grant to present paper in ISDA 2012
- Dean's List Scholarship of BUET (2009, 2011)

References

- Dr. Svetlana Yarosh
Assistant Professor, Department of Computer Science and Engineering, University of Minnesota.
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- Dr. Loren Terveen
Professor, Department of Computer Science and Engineering, University of Minnesota.
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