

Education

- 2013–2016 **MS (By Research)**, *Department of Computer Science and Engineering, Indian Institute of Technology Kharagpur, India*, CGPA-9.03.
Thesis Title: Interactions with Smartphones and Smartwatches: Context-Awareness, Text Entry Interfaces, and Input Beyond Touch.
- 2008–2012 **B.Tech**, *West Bengal University of Technology, Kolkata*, CGPA-8.44.
Specialization: Information Technology
- 2006–2008 **XII**, *West Bengal Council of Higher Secondary Education*, 85.42% .
- 2004–2006 **X**, *West Bengal Board of Secondary Education*, 87.75%.

Experience

- June, **Summer Intern**, *Samsung R&D Institute, Bangalore*.
2016–Nov, Faculty Contact: **Ashok Subash**
2016 Developing seamless interaction technique to control physical appliances in IoT environment using smart-ring.
- May, **Summer Intern**, *Xerox Research Center India, Bangalore*.
2015–July, Project Mentor: **Dr. Kuldeep Yadav**
2015 Designed a framework using smartwatch's accelerometer and gyroscope sensors to recognize a set of arm actions (e.g. drinking water/coffee, smoking, typing on a laptop, washing hands, brushing etc.) on a fine-grained level.
- Jan, **Research Assistant**, *HCI Lab, IIT Kharagpur*.
2013–May, Faculty Contact: **Dr. Debasis Samanta**
2016 Conducted research on designing novel interaction techniques for mobile and wearable devices.
- July, **Project Trainee**, *CVPR Unit, Indian Statistical Institute, Kolkata*.
2012–Dec, Faculty Contact: **Dr. Utpal Garain**
2012 Conducted research on authentication of Indian bank-note using image processing and pattern recognition techniques.
- Feb, **Visiting Student Researcher**, *Information Technology Department, NIT Durgapur*.
2012–May, Faculty Contact: **Dr. Nanda Dulal Jana**
2012 Conducted research to improve the optimization performance of Differential Evolution and Artificial Bee Colony algorithms.

Research Interests

Mobile Interaction, Wearable Computing, Context-Aware Computing, Machine Learning.

Publications

- [1] **Rajkumar Darbar**, Mainak Choudhury, Vikalp Mullick, "RingIoT: A Smart Ring Controlling Things in Physical Spaces", In 22nd ACM Conference on Intelligent User Interfaces (IUI 2017), 13 - 16 March, 2017, Limassol, Cyprus.
- [2] **Rajkumar Darbar**, Prasanta Kr. Sen, Debasis Samanta, "PressTact: Side Pressure-Based Input for Smartwatch Interaction", In 34th ACM Conference on Human Factors in Computing Systems (CHI 2016), 7 - 12 May, 2016, San Jose, CA, USA.

- [3] **Rajkumar Darbar**, Debasis Samanta, "SurfaceSense: Smartphone Can Recognize Where It Is Kept", In 7th ACM International conference on Human Computer Interaction (IndiaHCI 2015), 17 - 19 Dec, 2015, IIT Guwahati, India.
- [4] **Rajkumar Darbar**, Punyashlok Dash, Debasis Samanta, "ETAO Keyboard: Text Input Technique on Smartwatches", In 7th IEEE International conference on Intelligent Human Computer Interaction (IHCI 2015), 14 - 16 Dec, 2015, IIIT Allahabad, India.
- [5] **Rajkumar Darbar**, Prasanta Kr. Sen, Punyashlok Dash, Debasis Samanta, "Using Hall Effect Sensors for 3D space Text Entry on Smartwatches", In 7th IEEE International conference on Intelligent Human Computer Interaction (IHCI 2015), 14 - 16 Dec, 2015, IIIT Allahabad, India.
- [6] **Rajkumar Darbar**, Debasis Samanta, "MagiText : Around Device Magnetic Interaction for 3D Space Text Entry in Smartphone", In 3rd IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT 2015), 10 - 11 July 2015, IIIT-Bangalore, India.
- [7] Biswajit Halder, **Rajkumar Darbar**, Utpal Garain, Abhoy Ch. Mondal, "Analysis of Fluorescent Paper Pulps for Detecting Counterfeit Indian Paper Money", In 10th International Conference on Information Systems Security (ICISS 2014), 16 - 20 Dec, 2014, IDRBT Hyderabad, India.
- [8] Biswajit Halder, Utpal Garain, **Rajkumar Darbar**, Abhoy Ch. Mondal, "Inverse of Low Resolution Line Halftone Images for Document Inspection", In 6th IAPR International Workshop on Computational Forensics (IWCF 2014), 14 Aug, 2014, Sweden.
- [9] Nanda Dulal Jana, Adiya N. Hati, **Rajkumar Darbar**, Jaya Sil, "Real Parameter Optimization using Levy Distributed Differential Evolution", In 5th International Conference on Pattern Recognition and Machine Intelligence (PReMI 2013), 10 - 14 Dec, 2013, Indian Statistical Institute Kolkata, India.

Technical Skills

C, C++, Java, Python, Android, Weka, Matlab, Arduino, Tizen.

Awards & Fellowships

- Received travel grant from Microsoft Research India to attend CHI 2016 conference.
- Senior Research Fellowship (SRF), SRIC-IIT Kharagpur, 2013 - 2014.

Extra Curricular

- Student volunteer at IEEE TechSym'14, IEEE IHCI'12 and IndiaHCI'15.
- Participated in Tizen Developer Summit, 30 - 31 July, 2015, Bangalore.
- ACM Student Member since September 2015. Membership Number is 1649658.
- Research talk on "Recent Advances in Text Entry Mechanisms: From Mobile Device to Wearable Device" at 6th Research Scholars' Day, 2015, SIT, IIT Kharagpur.
- Former Secretary of Information Technology Departmental Society (ITDS) Club, School of Information Technology, IIT Kharagpur.