

RAHUL MAJETHIA

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RESEARCH EXPERIENCE

Ph.D. Student (Advisors: Dr. Santosh Singh & Dr. Krishnan Rajkumar)

Department of Mathematics, Shiv Nadar University

January 2014 – Ongoing Greater Noida, India

- Leveraging micro-events for deep context mining including human-human interactions and behavior.
- Developing models for robust Bluetooth Low Energy based ranging for indoor environments.

Project Research Assistant

ITRA Mobile, Dept. of Electronics and IT, Govt. of India

January 2014 – August 2015 Greater Noida, India

- Designed system architecture to crowdsource sensor-data from smartphones and interfaced Bluetooth devices like Sensorcon’s Sensordrone - specifically data-sampling efficiency and mining environment data. [\[Publication\]](#)

WORK EXPERIENCE

Research Collaborator (with Dr. Fahim Kawsar and Akhil Mathur)

Nokia Bell Labs

December 2016 – December 2017 Cambridge, UK

- Exploring application usage, notification interaction behavior, battery charging patterns and the impact of context on usage patterns of Indian users. [\[Publication\]](#)
- Understanding how users interact with and choose between competing apps. [\[Publication\]](#)

Research Assistant (Mentor: Dr. Archan Misra)

LiveLabs, Singapore Management University

Jan - June 2013 Singapore, SG

- Designed a smartphone-based system for real-time Queue detection in public venues (e.g. food courts, airport check-in) using inertial sensor (e.g. accelerometer, gyroscope) data. [\[Acknowledged Here\]](#)
- Developed a back-end system to compute individual and aggregate queue parameters [e.g. service time, waiting time in queues, etc.], addressing energy-efficiency and concurrent queue detection.

Undergraduate Summer Intern (Mentor: Dr. Vikram Srinivasan)

Bell Labs Research

May - July 2012 Bengaluru, India

- Evaluated performance trade-off between local memory and Remote Memory access techniques like Jumbo Memory (SCS), Network Block Device and ATA-over-Ethernet within on-rack VMs. Worked on the development of a system architecture of a ‘super VM’ controller for dynamical memory allocation to cloud applications.

EDUCATION

Ph.D. (Mathematics)

Shiv Nadar University (GPA: 9.1/10)

Expected Summer 2019

B.Tech. in Computer Science

NIIT University (GPA: 9.5/10)

Sept 2009- Aug 2013

COURSEWORK

Mining of Massive Datasets

Computational Statistics

Probability

Performance Modeling

Wireless Sensor Networks

Computer Networks

Database Systems

Operating Systems

Advanced Algorithms

Object Oriented Programming

PROGRAMMING SKILLS

Android

R

Julia

Python

TensorFlow



AWARDS



ITRA Ph.D. Research Award, DEITY

Awarded by the Govt. of India, for significant contribution to ITRA Mobile project tasks (2014-15)



Shiv Nadar Fellowship

Ph.D. Scholarship for 4 years (2014-2018) in lieu of RA and TA duties for Algorithms, Probability and Statistics, Introduction to Computing



Student Grants

Travel grants for presenting work at IEEE COMSNETS 2015 and COMSNETS 2016.

TEACHING EXPERIENCE

Probability and Statistics - MAT205

Graduate Teaching Assistant

📅 Fall 2016, Fall 2017 📍 Shiv Nadar University, India

Design and Analysis of Algorithms - CSD335

Graduate Teaching Assistant

📅 Spring 2014, Spring 2015 📍 Shiv Nadar University, India

Introduction to Computing and Programming - CSD101

Course Instructor

📅 Fall 2014 📍 Shiv Nadar University, India

PUBLICATIONS

📄 Journal Articles

- Mathur, Akhil et al. (2017). "Moving Beyond Market Research: Demystifying Smartphone User Behavior in India". In: *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.* IMWUT 1.3.

👥 Conference Proceedings

- Majethia, Rahul and Krishnan Rajkumar. "Mining Channel State Information from Bluetooth Low Energy RSSI for Robust Object-to-Object Ranging". In: *Proceedings of the Eight International Conference on the Internet of Things, IOT 2018, Santa Barbara, United States, October 15-18, 2018 (to-appear)*.
- Kalanadhabhatta, Lakshmi Manasa et al. (2017). "Application Overchoice: Preliminary Lessons from a Longitudinal Study". In: *Proceedings of the 2017 ACM International Joint Conference on Pervasive and Ubiquitous Computing*. UbiComp '17. Maui, USA: ACM.
- Majethia, Rahul, Akshit Singhal, et al. (2016). "AnnoTainted: Automating Physical Activity Ground Truth Collection Using Smartphones". In: *Proceedings of the 3rd International Workshop on Physical Analytics*. MobiSys '16. ACM. Singapore, pp. 13–18.
- Majethia, Rahul, Anurag Joshi, et al. (2015). "TicTorque: diagnosing effects of blink tics through mobile EEG headsets". In: *Adjunct Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2015 ACM International Symposium on Wearable Computers*. UbiComp '15. ACM. Osaka, Japan, pp. 25–28.
- Majethia, Rahul, Varun Mishra, et al. (2015). "Contextual sensitivity of the ambient temperature sensor in smartphones". In: *Communication Systems and Networks (COMSNETS), 2015 7th International Conference on*. IEEE, pp. 1–8.
- Rajan, Sundara et al. (2015). "HuMorse: smartphone based unified home automation for the disabled and elderly". In: *Adjunct Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2015 ACM International Symposium on Wearable Computers*. UbiComp '15. ACM. Osaka, Japan, pp. 5–8.

REFEREES

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✉ Software Engineer, Research
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