

# Varun Mishra

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## Research Interest

*Ubiquitous computing, mobile sensing, mental health modeling, context awareness, state of receptivity, user interruptibility, and data mining.*

My current research interest broadly focuses on development of novel mobile sensing and intervention systems for smartphones and wearable devices. I am particularly interested in sensing mental and behavioral health conditions, e.g., stress, anxiety and mood, and providing meaningful and impacting interventions.

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## Education

Dartmouth College

**Ph.D., Computer Science**

Advisor: Prof. David Kotz

HANOVER, USA

August '15 – Present

Shiv Nadar University

**B.Tech., Computer Science and Engineering**

*Minor in Mathematics*

UTTAR PRADESH, INDIA

August '11 – June '15

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## Work Experience

Dartmouth College

**Research Assistant**

My work involves development of novel sensing technologies using smartphones, smartwatches, and custom wearables, to assist in mental health sensing, and context aware intervention delivery, based on the the users' availability and receptivity.

HANOVER, USA

Sept '15 – Present

Siemens

**Research Intern**

My work focused on analyzing the meta data involved with a new software project development, and predicting the defects and risks the developers could encounter over the course of the software development life-cycle.

*Technologies Used – JAVA, .NET*

BENGALURU, INDIA

Jan '15 – Jun '15

Shiv Nadar University

**Undergraduate Research Assistant**

I was involved in the project titled *HumanSense: Towards context aware sensing, inference and actuation for applications in Energy and Healthcare*. I worked on developing novel sensing applications for crowd-sourcing of air temperature, air quality, and atmospheric pressure.

*Technologies Used – JAVA, Android, PHP*

UTTAR PRADESH, INDIA

Feb '14 – Dec '14

Indian Institute of Technology

**Research Intern**

Developed a Natural Language Processing application to read Software Requirement Specification and generate UML Class diagrams.

*Technologies Used - JAVA, Stanford Natural Language Processing Libraries*

DELHI, INDIA

Jun '13 – May '13

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## Publications

- [5] Harari, G. M., Müller, S. R., **Mishra, V.**, Wang, R., Campbell, A. T., Rentfrow, P. J., Gosling, S. D., "An Evaluation of Students' Interest in and Compliance With Self-Tracking Methods: Recommendations for Incentives Based on Three Smartphone Sensing Studies", *Social Psychological and Personality Science*, pp. 1–14, 2017.
- [4] **Mishra, V.**, Lowens, B., Lord, S., Caine, K., Kotz, D., "Investigating Contextual Cues As Indicators for EMA Delivery", in *Proceedings of the 2017 ACM International Joint Conference on Pervasive and Ubiquitous Computing*, ser. UbiComp '17, Maui, Hawaii: ACM, 2017, pp. 935–940. doi: 10.1145/3123024.3124571.

- [3] Majethia, R., **Mishra, V.**, Singhal, A., Manasa K, L., Sahiti, K., Nandwani, V., “PeopleSave: Recommending effective drugs through web crowdsourcing”, in *2016 8th International Conference on Communication Systems and Networks (COMSNETS)*, IEEE, 2016, pp. 1–6. doi: 10.1109/COMSNETS.2016.7440000.
- [2] Majethia, R., **Mishra, V.**, Pathak, P., Lohani, D., Acharya, D., Sehrawat, S., “Contextual sensitivity of the ambient temperature sensor in Smartphones”, in *2015 7th International Conference on Communication Systems and Networks (COMSNETS)*, IEEE, 2015, pp. 1–8. doi: 10.1109/COMSNETS.2015.7098674.
- [1] Rajan, S., Joshi, M., **Mishra, V.**, Dasgupta, I., Joshi, A., Majethia, R., “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*, ser. UbiComp’15 Adjunct, Osaka, Japan: ACM, 2015, pp. 5–8. doi: 10.1145/2800835.2800840.

## Teaching Experience

Guest Lecturer	DARTMOUTH COLLEGE
<b>COSC 65: Smartphone Programming</b>	<i>Fall '17</i>
Teaching Assistant	DARTMOUTH COLLEGE
<b>COSC 65: Smartphone Programming</b>	<i>Fall '17, Winter '17, Winter '16</i>
<b>COSC 76: Artificial Intelligence</b>	<i>Fall '16</i>
<b>COSC 52: Full-Stack Web Development</b>	<i>Summer '16</i>
<b>COSC 31: Algorithms</b>	<i>Fall '15</i>

## Skills

### Technical Skills

Java, Python, Objective C, Mongo, PHP, MySQL, C/C++, Visual Studio, .Net, MATLAB

### Frameworks

Android, iOS, WEKA, J2ME, Hadoop, L<sup>A</sup>T<sub>E</sub>X

## Service

### Workshop Organizer

**Mental Health and Well-being: Sensing and Intervention** 2016  
    Workshop at UbiComp '16

### Reviewer

CHI '18, Journal of Ambient Intelligence and Humanized Computing '17–'18

## Leadership and Social Awareness

President – SNU Technology and Innovations Club

*Shiv Nadar University* 2012–2013

Volunteer at Playtime Delhi

*A non-profit organization for Autistic Children in Delhi* 2010 – Present