
Education

New York University CGPA: 3.82	New York, NY
<i>Ph.D. Candidate in Computer Science. Advisor: Rumi Chunara</i>	2015 – Present
Lahore University of Management Sciences (LUMS)	Lahore, Pakistan
<i>Bachelor of Science in Electrical Engineering</i>	2009 – 2013

Research Experience

New York University	New York, NY
<i>Graduate Research Assistant. Advisor: Rumi Chunara</i>	September 2015 – Present

- Improved prediction of mobility timelines from sparse location data through a novel stochastic framework and a recursive neural network architecture. (*Rehman et. al, SIGSPATIAL '18*)
- Accessed the comparative effectiveness of 3 million Dengue containment activities with timeseries and spatio-temporal methods. (*Rehman et. al, Lancet Global Health (under review)*)
- Identified the causal effect of health information on the vaccination sentiment of users through propensity score matching. (*Rehman et. al, AAAI Spring Symposia '16*)
- Improved prediction of acute respiratory infection from crowd-sourced data sets with clinical data and domain adaptation methods. (*Mhasawade, Rehman et. al, NIPS ML4H '18*)

Design Technology Lab, NYUAD	Abu Dhabi, UAE
<i>Research Assistant. Advisor: Jay Chen</i>	June 2015 – August 2015

- Developed a web interface to generate, visualize and edit datasets.

Information Technology University (ITU)	Lahore, Pakistan
<i>Research Associate. Advisor: Umar Saif, Lakshminarayanan Subramanian</i>	August 2013 – May 2015

- Quantified the utility of volume of hotline calls in forecasting Dengue incidences at sub-city granularity. (*Rehman et. al, Science Advances*)
- Developed Dengue breeding hotspots detection system for Punjab Govt. by leveraging supervised and semi-supervised learning methods.

Lahore University of Management Sciences	Lahore, Pakistan
<i>Research Assistant. Advisor: Umar Saif</i>	May 2011 – July 2013

- Evaluated the performance of outbreak detection algorithms on data from Google Flu Trends. (*Pervaiz, Pervaiz, Rehman et. al, JMIR*)
 - Characterized the spread and severity of dengue from local news articles in Pakistan by leveraging NLP techniques and regression models. (*Ahmad, Rehman et. al, ACM DEV '13*)
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Publications

8. Creating Full Individual-level Location Timelines from Sparse Social Media Data
Nabeel Abdur Rehman, Kunal Relia, Rumi Chunara
SIGSPATIAL – 26th International Conference on Advances in Geographic Information Systems, 2018
7. Comparative effectiveness of vector containment activities using empirical dengue incidence and activity data in urban settings in Pakistan: a spatial and time series modelling analysis
Nabeel Abdur Rehman et al.
The Lancet Global Health, 2018 (under review)
6. Population-aware Hierarchical Bayesian Domain Adaptation
Vishwali Mhasawade, **Nabeel Abdur Rehman**, Rumi Chunara
NIPS ML4H – NIPS Workshop on Machine Learning for Health, 2018
5. Fine-grained Dengue Forecasting Using Telephone Triage Services
Nabeel Abdur Rehman, Shankar Kalyanaraman, Talal Ahmad, Fahad Pervaiz, Umar Saif, Lakshminarayanan Subramanian
Science Advances, 2016

4. Using Propensity Score Matching to Understand the Relationship Between Online Health Information Sources and Vaccination Sentiment
Nabeel Abdur Rehman, Jason Liu, Rumi Chunara
[AAAI Spring Symposia](#) – *Proceedings of Association for the Advancement of Artificial Intelligence Spring Symposia, 2016*
3. Characterizing Dengue Spread and Severity Using Internet Media Sources
 Talal Ahmad, **Nabeel Abdur Rehman**, Fahad Pervaiz, Shankar Kalyanaraman, Maaz Bin Safeer, Sunandan Chakraborty, Umar Saif, Lakshminarayanan Subramanian
[ACM DEV](#) – *Proceedings of the 3rd ACM Symposium on Computing for Development, 2013*
2. Punjab-IDSS: Dengue Surveillance, Early Detection and Containment
 Fahad Pervaiz, T Ahmed, **Nabeel Abdur Rehman**, Umar Saif, Lakshminarayanan Subramanian
[mHealth Summit](#), 2012
1. FluBreaks: Early Epidemic Detection from Google Flu Trends
 Fahad Pervaiz, Mansoor Pervaiz, **Nabeel Abdur Rehman**, Umar Saif
[JMIR](#) – *Journal of Medical Internet Research, 2012*

Teaching Experience

Design Lab 2 – Graduate Level	ITU
<i>Teaching Assistant</i>	<i>Fall 2013</i>
Introduction to Artificial Intelligence – Undergraduate Level	LUMS
<i>Teaching Assistant</i>	<i>Fall 2013</i>

Awards

NSF Student Travel Grant	National Science Foundation
<i>Awarded to selected students to attend the 26th ACM SIGSPATIAL Conference</i>	<i>2018</i>
Dean’s Fellowship	New York University
<i>Awarded to outstanding incoming students at the School of Engineering</i>	<i>2015 – 2016</i>

Academic Community Service

Science Advances	
<i>Reviewer</i>	<i>2016</i>
CHI 2013: ACM SIGCHI Conference on Human Factors in Computing Systems	Paris, France
<i>Reviewer</i>	<i>2013</i>
Pakistan ICTD Workshop	Lahore, Pakistan
<i>Program Committee</i>	<i>15-16th Jan 2013</i>

Selected Media Coverage

- [The Atlantic](#): How a Hotline Helped Control Dengue Outbreaks
- [New York Times](#): Hotlines Faster Than Hospitals in Pinpointing Dengue, Study Says
- [Reuters](#): In first, scientists use phones to track dengue outbreaks in poor nations
- [IEEE Spectrum](#): Telephone Hotline Data Forecasts Dengue Outbreaks Three Weeks Ahead
- [NPR](#): Hotline In Lahore Helped Predict Surges In Dengue Fever
- [Voice of America](#): Telephone Hotline in Pakistan Predicts Dengue Outbreaks
- [MIT Technology Review](#): Pakistan Uses Smartphone Data to Head Off Dengue Outbreak
- [The Economist](#): Zapping mosquitoes, and corruption
- [The Huffington Post](#): How Cellphones Helped to Dramatically Reduce New Cases of Dengue Fever in Pakistan
- [techPresident](#): What the Internet Can Tell Us About Flu Season

Programming and Development Skills

R, Python, Matlab, MySQL, D3.js, C++, 3d Studio Max