

Vibhuti Gupta, Ph.D.

Pediatrics - Hematology/Oncology, D4206, MPB
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Current Position(s)

Postdoctoral Research Fellow, Department of Pediatrics, Hematology/Oncology
University of Michigan
Ann Arbor, MI

Education

Ph.D. in Computer Science, Texas Tech University, Lubbock, TX, USA	2019
M.Tech. in Computer Science, SRM University, Chennai, TN, India	2012
B.Tech. in Computer Science, BIET, Jhansi, UP, India	2010

Academic Appointments

Instructor, Programming & Data Analysis in MATLAB/R Department of Computer Science Texas Tech University Lubbock, Texas	Fall 2019
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Professional Positions and Experience

System Engineer Tata Consultancy Services Noida, UP, India	2012-2015
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Professional Memberships and Activities

Institute of Electrical and Electronics Engineers (IEEE)	2015- Present
Association for Computing Machinery (ACM)	2015- Present

Editorial Board Appointments

Review Editor: Frontiers in Psychology: The Quantitative Psychology and Measurement Section 2020
Invited Reviewer: Journal of Medical Internet Research, Nursing Open Journal, Electronics, IEEE Access

Educational Activities

- Taught course focused on MATLAB and R introductory programming and their usage for data analytics using various statistical and Machine Learning Techniques.
- Designed course curriculum, course lectures, assignments, assessments, and projects for the course.
- Graded assessments and conducted interactive discussion sessions.

Honors and Awards

Graduate School Conference Travel award, Texas Tech University	2017- 2018
Research assistantship, IMMAP, Texas Tech University	2015 - 2019
Graduate School Fellowship, Texas Tech University	2015
Summer Research Departmental Scholarship, Texas Tech University	2015
President award for securing First rank in Masters, SRM University	2012

Publications

Peer-reviewed Journal Publications

1. **Gupta, V.**, Braun, T. M., Chowdhury, M., Tewari, M., & Choi, S. W. A Systematic Review of Machine Learning Techniques in Hematopoietic Stem Cell Transplantation (HSCT). *Sensors*, 2020, 20(21), 6100, DOI: 10.3390/s20216100.
2. **Gupta, V.**, Jung, K., Yoo, S. Exploring the Power of Multimodal Features for Predicting the Popularity of Social Media Image in Destination Marketing, *Multimodal Technologies & Interaction*, 2020, 4(3), 64, DOI: 10.3390/mti4030064 .
3. **Gupta, V.**, & R. Hewett. Real-time Tweet Analytics using Hybrid Hashtags on Twitter Big Data, *Information*, 2020, 11(7), 341, DOI: 10.3390/info11070341.
4. Jung, K., Lee, J., **Gupta, V.** & Cho, G. Comparison of Bootstrap Confidence Interval Methods for GSCA Using Monte Carlo Simulations. *Frontiers in psychology*, 2019,10, 2215, DOI: 10.3389/fpsyg.2019.02215.

Refereed Conference Proceedings & preprints

1. **Gupta, V.**, & Hewett, R. Adaptive Normalization in Streaming Data. *In Proceedings of 3rd International Conference on Big Data Research (ICBDR)*, Paris, France, Nov 2019.
2. **Gupta, V.**, & Hewett, R. Unleashing the Power of Hashtags in Tweet Analytics with Distributed Framework on Apache Storm. *In Proceedings of IEEE International Conference on Big Data*, Seattle, WA, USA, Dec 2018.
3. **Gupta, V.** Voice disorder detection using long short term memory (LSTM) model. *arXiv preprint arXiv:1812.01779*, 2018.
4. **Gupta, V.**, & Hewett, R. Harnessing the power of hashtags in tweet analytics. *In Proceedings of IEEE International Conference on Big Data*, Boston, MA, USA, Dec 2017.

Works in Progress

1. Weyand, A. C., Fitzgerald, K. D., McGrath, M., **Gupta, V.**, Braun, T., Quint, E.H., & Choi, S. W. Depression in adolescent females presenting to primary care with heavy menstrual bleeding, *Pediatrics*, 2020. (Under Review).
2. **Gupta, V.**, Raj, M., Hoodin, F., Lilian, Y., Braun, T. & Choi, S. W. Patient portal use among family caregivers of patients undergoing hematopoietic stem cell transplantation, *Cancer Medicine*, 2020. (Under Review).

Published Abstracts and Presentations

1. Jung, K., Lee, J., **Gupta, V.**, Kim, S., & Hwang, H. Simulation Based Investigation of Optimal Modeling Approaches for SEMs with Ordinal Variables, *The NCME Annual Meeting*, Toronto, Canada, Apr 2019.
2. Jung, K., Lee, J., **Gupta, V.**, Kim, S., & Hwang, H. Application of Generalized Structured Component Analysis for Brain Connectivity Research, *KSEA West Gulf Coast Regional Conference*, Houston, TX, USA, Oct 2018.
3. Pyakurel, A., **Gupta, V.**, Li, Y., Oyedeggi, B., Gittner, K., Pitalua-Rodriguez, M., Guthrie, H., Shetty, R., Mengel, S., Khan, H. MR., Vadapalli, R., & Gittner, L. A Multidisciplinary Preliminary Approach to Systems Thinking for CVD Risk Prevention, *Academy Health National Health Policy Conference*, New Orleans, LA, USA, Jun 2017.
4. Li, Y., Mengel, S., Gittner, L., Pitalua-Rodriguez, M., **Gupta, V.**, Khan, H. MR., Gittner, K., & Pyakurel, A. Relational Analysis through Graph Data Reduction Technique, American Public Health Association Annual Meeting & Expo (APHA), Atlanta, GA, USA, Nov 2017.
5. Pitalua-Rodriguez, M., Mengel, S., Gittner, L., Gittner, K., **Gupta, V.**, Pyakurel, A., Li, Y., Vadapalli, R., & Khan, H. MR. Visualizing Disease Patterns along I-20 from El Paso to Shreveport. *American Public Health Association Annual Meeting & Expo (APHA)*, Atlanta, GA, USA, Nov 2017.
6. Gittner, K., Gittner, L., Khan, H. MR, Mario Pitalua, Pitalua-Rodriguez, M., Pyakurel, A., **Gupta, V.**, & Li, Y., Contrasting Models of Cardiovascular Disease Prediction: Reevaluating Age Adjusted Variables. *American Public Health Association Annual Meeting & Expo (APHA)*, Atlanta, GA, USA, Nov 2017.

Computer Skills

- **Programming Languages:** R, Python, C, C++, Java, MATLAB
- **Databases:** MySQL, NoSQL
- **Big Data Technologies:** Apache Storm, Kafka, Hadoop, Spark
- **ML/DL Tools:** Pandas, SciKit, numpy, scipy, Tensorflow, Keras
- **Visualization Tools:** Matplotlib, D3.js, ggplot2
- **Operating System:** Windows, Linux
- **Other Tools:** GitHub, Microsoft Office Tools, LaTeX, Maven