Dr. Harshvardhan
Assistant Professor, IS & Analytics

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Education

Aug 2021 – May 2025	**PhD in Business Analytics** University of Tennessee, Knoxville, USA Dissertation Title: *From Data to Decisions: Enterprise Demand Forecasting with Machine Learning* Advisor: Dr. Chuanren (Charles) Liu
Jul 2019 – Apr 2021	**Master of Business Administration (MBA)** Indian Institute of Management, Indore, India
Jan 2019 – Jun 2019	**International Exchange (ERASMUS+ Scholar)** University of Latvia, Rīga, Latvia
Aug 2016 – Jun 2019	**Bachelor of Arts (Foundations of Management)** Indian Institute of Management, Indore, India

Work Experience

Aug 2025 – Present	**Assistant Professor, Information Systems & Analytics**, *American University of Sharjah*, UAE ○ Teaching information systems and analytics courses to undergraduates and graduate students. ○ Conducting research in machine learning, artificial intelligence applications and applied analytics.
Aug 2021 – May 2025	**Graduate Assistant**, *University of Tennessee*, Knoxville, TN, USA ○ Primary instructor for STAT 201 (Introductory Statistics), 115+ students. ○ Recipient of UT Graduate Fellowship; Top-12 in 3-Minute Thesis Competition.
May 2022 – Aug 2023	**Data Science Intern**, *HP Inc.*, Vancouver, WA, USA ○ Developed ML models for global print product forecasting, improving accuracy by 30%. ○ Enhanced production pipelines for scalable deployment of analytical models through MLOps.
Apr 2021 – Jun 2021	**Analyst**, *Aspect Ratio (Merck Global Centre)*, Pune, India ○ Built forecasting models for vaccine demand across EU and US markets.
Apr 2021 – Jun 2021	**Developer (Pro bono)**, *Asar for India*, Remote, https://www.harsh17.in/shiny-urca/ ○ Created R Shiny dashboard to aggregate and export global population data.
May 2020 – Jul 2020	**MBA Intern, Retail**, *Tata Consultancy Services*, Chennai, India ○ Analyzed retail value chains and omnichannel strategies for Indian retailers.
May 2018 – Jun 2019	**Research Intern**, *Indian Institute of Management*, Indore, India ○ Researched Gaussian correlation structures to address near-singularity issues.

Research Interests

Broad Areas	Machine Learning, Deep Learning, Forecasting, Optimization, Data Science
Specific Topics	○ Predictive Optimization: Integrating machine learning forecasts into operational and strategic decision-making. ○ Generative AI and Large Language Models: Applications in education, analytics, and human–AI collaboration. ○ Scalable Forecasting Systems: Leveraging MLOps for enterprise-level demand and supply chain forecasting.

Publications

2025 **Harshvardhan, M.**, Curtland, C., Hwang, J., VanDam, C., Ghozeil, A., Neto, P. A., Marie, F., Liu, C. (2025). "Print Demand Forecasting with Machine Learning at HP Inc.". *INFORMS Journal of Applied Analytics*. [DOI]

2025 **Harshvardhan, M.**, Liu, C., Curtland, C., Ghozeil, A. (2025). "Forecast Smarter, Not Harder: Machine Learning for Demand Forecasting at HP Inc.". Forthcoming at *Foresight: The International Journal of Applied Forecasting*

2023 Mao, W., Liu, C., Huang, Y., Zu, Z., **Harshvardhan, M.**, Wang, L., Zheng, B. (2023). "End-to-End Inventory Prediction and Contract Allocation for Guaranteed Delivery Advertising". In *Proceedings of the 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD '23)*, August 6–10, 2023, Long Beach, CA, USA. [DOI]

2022 Ranjan, P., **Harshvardhan, M.** (2022). "The Evolution of Dynamic Gaussian Process Model with Applications to Malaria Vaccine Coverage Prediction". In Hanagal, D. D., Latpatel, R. V., Chandra, G. (Eds.), *Applied Statistical Methods: ISGES 2020*. Springer. Singapore.[DOI]

2021 **Harshvardhan, M.**, Kumar, B. (2021). "Invento Robotics: Launching Humanoid Robots". Case Study and Teaching Note. *Ivey Publishing*. [The Case Centre]

2019 **Harshvardhan, M.**, Ranjan, P. (2019). "Statistical Modelling and Analysis of the Computer-Simulated Datasets". In Gupta, B., Agrawal, D. (Eds.), *Handbook of Research on Cloud Computing and Big Data Applications in IoT* (pp. 202-228). Hershey, PA: IGI Global. [DOI]

Working Papers

2025 C. Reed & **M. Harshvardhan**. "Determining E-commerce Strategies among U.S. Grocery Stores." Under revision at *Applied Geography*.

2024 **M. Harshvardhan**, Y. Qu & C. Liu. "Predictive Optimization in Supply Chain Planning."

2024 **M. Harshvardhan**, C. Liu & M. Aydeniz. "Intelligent Education Systems: Advances & Future Research." Literature review.

Teaching

Primary Instructor

Fall 2023 STAT 201: Introduction to Statistics (115 students)

Teaching Assistantships

Spring 2025 BUAD 220: Emerging Technologies in Business (20 students). Course Website

Spring 2025 STAT 505: Business Analytics for MBA (30 students)

Fall 2024 BA 341: Lean Operations (600+ students)

Summer 2024 STAT 201: Introduction to Statistics (187 students)

Spring 2024 STAT 577: Data Mining Methods and Applications (40 students)

Spring 2024 STAT 505: Business Analytics for MBA (30 students)

Spring 2023 BZAN 557: Text Mining (40 students)

Fall 2022 BZAN 542: Data Mining Methods for Business Applications (40 students)

Spring 2021 BA 341: Lean Operations (600+ students)

Fall 2021 BZAN 555: Supply Chain Analytics (30 students)

Guest Lectures

2023 "Financial Products Complaints" for MSBA class, University of Tennessee, 2023

2023 "Online Textual Data Analysis" for MSBA class, University of Tennessee, 2023

2022 "Case Study on Association Mining" for MSBA class, University of Tennessee, 2022

2022 "Support Vector Machines" for MSBA class, University of Tennessee, 2022

2022 "[Introduction to R Markdown and GitHub](#)" for MSBA class, University of Tennessee, 2022

2020 "Introduction to Shiny on RStudio" for FPM (PhD) students, IIM Indore, 2020

2017 "Introduction to LaTeX for Resume and Assignments" open to all participants, IIM Indore, 2017

Awards & Scholarships

2024 Nominated for "Outstanding Doctoral Student Teacher Award" by the Haslam College of Business, University of Tennessee.

2024 Received a Top-3 Poster Presentation award at the SMART-AI Workshop, University of Tennessee.

2024 Ranked among 12 Finalists in the 3-Minute Thesis (3MT) Competition at University of Tennessee.

2023 Awarded the University of Tennessee Graduate Fellowship, University of Tennessee.

2023 Recipient of the KDD Travel Support Award at the ACM SIGKDD Conference on Knowledge Discovery and Data Mining.

2023 Received the Haslam College of Business Travel Grant, University of Tennessee.

2022 Honored as InternStellar Award Runner-up for Best Internship Project (Technical Impact), HP Inc.

2019 Received the ERASMUS+ grant from the European Commission for an exchange semester at the University of Latvia.

2009–2016 Awarded the Ministry of Defence Scholarship by the Government of India, Sainik School Tilaiya.

2009–2016 Awarded the Government of Jharkhand Scholarship, Sainik School Tilaiya.

Posters & Presentations

2025 Electronic poster on "Geographical Disparity in Incidence of Young Colorectal Cancer across States in the United States" at SSO 2025 (Society of Surgical Oncology Annual Meeting), Tampa, FL; Presented by Dr. Swati Sonal

2024 Poster on "End-to-End Inventory Prediction and Contract Allocation for Guaranteed Delivery Advertising" at SMART-AI Workshop 2024, University of Tennessee — *Best Poster Winner*

2023 Research presentation and poster on "[End-to-End Inventory Prediction and Contract Allocation for Guaranteed Delivery Advertising](#)" at SIGKDD, Long Beach, CA, 2023

2023 Research presentation on "[Artificial Intelligence and Data Sciences in Real-world Businesses](#)" at Business Analytics Forum, University of Tennessee, 2023

2023 Panel discussion on "[Why Academia?](#)" for Research Methodology class at IIM Indore, 2023

2022 Workshop on "[Personal Website for Academics](#)" at INFORMS — University of Tennessee Chapter, 2022

2022 Invited talk "[I Web. Therefore I Exist](#)" on creating and controlling digital identity at R Users Trenton, 2022

2018 Tutorial on "Using LaTeX for Resume and Assignments" for undergraduate students at IIM Indore, 2018

Activities

Service Responsibilities

2025 Anonymous Reviewer, *INFORMS Journal of Applied Analytics*

2025 Anonymous Reviewer, *Production Planning and Control*

2025 Anonymous Reviewer, *Computers and Operations Research*

2024 Anonymous Reviewer, *Electronic Commerce Research and Applications*

2022–2025 Treasurer, INFORMS — University of Tennessee Chapter; coordinated with core members and organized local chapter events

2019–2021	Coordinator, Corporate Involvement, IRIS '20 (IIM Indore); led a 10-member team engaging global leaders and coordinated with government agencies for ministerial visits
2018–2019	Coordinator, Information Technology Club (IIM Indore); organized 8+ tech events and international workshops; initiated a tech-economy podcast
April 2018	Volunteer, Data Science for Business Workshop (IIM Indore); assisted with workshop featuring 10 CXOs and 750+ attendees

Press

2023	Interview with UT Haslam College of Business titled "Curious About ChatGPT? Get Your Answers Here" (Haslam UTK News)
2021–2024	Wrote a weekly newsletter *Next — Today I Learnt About R* on Data Science, ML, and AI with 300+ subscribers
Ongoing	Regularly blog at harsh17.in/blog on Data Science, R, philosophy, and other eclectic topics

Professional Memberships

2021–	INFORMS Member since 2021
2023–	ACM Member since 2023
2025–	International Institute of Forecasting (IIF) Member since 2025

Interests

Sports & Culture	Field Hockey (Sainik School Zonal Silver Medallist '13); Cultural — Mime and Music (Sainik School Zonal Gold Medallist '14)
Adventure	Trekking, Hiking, Bicycling, Sky Diving, Bungee Jumping, Parasailing, Kayaking, Rafting

Open-Source Projects

Mar 2022	garlic: R package for data utilities & ggplot2 theme (https://harshvardhaniimi.github.io/garlic/)
Jan 2022	IndiaPIN: R data package for India's 19,300 PIN codes (https://github.com/harshvardhaniimi/IndiaPIN)
Github	See https://harsh17.in/github for all open-source works
Projects	See https://www.harsh17.in/projects/ for full list of side projects

Technical Skills

Programming	R, Python, SQL, C, C++
Data Analysis	SPSS, STATA, Advanced Excel (VBA)
Writing	LaTeX, HTML, CSS, YAML

Languages

English	Bilingual, Full Professional Proficiency
Hindi	Native
German	Elementary (A1)

Last updated on: August 22, 2025