Deepesh Gotherwal

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Education

- **Ph.D. in Operations Management and Quantitative Techniques**, Indian Institute of Management (IIM), Indore
  July 2021 – Present
  Supervisor: Prof. Pritam Ranjan
- **B.Sc. in Programming and Data Science (Online)**, Indian Institute of Technology (IIT), Madras
  January 2022 – December 2025
- **M.E. in Mechanical Engineering**, Birla Institute of Technology and Science (BITS), Pilani
  August 2016 – July 2018
- **B.E. in Mechanical Engineering**, Maharana Pratap University of Agriculture and Technology, Udaipur
  August 2010 – July 2014

Professional Experience

- **Assistant Professor**, Presidency University, Bangalore
  July 2018 – June 2021
  - Taught courses in Engineering Graphics, Elements of Mechanical Engineering, Basic Thermodynamics, and Fluid Mechanics.
  - Conducted labs in Mechanical Workshop Practice, Machine Shop Practice, and Materials Testing.
  - Served as Class Coordinator, Faculty Advisor, and Disciplinary Coordinator.
- **Trainee Service Engineer**, Universal Engineers, Goa
  June 2015 – September 2015
  - Worked on preventive and breakdown maintenance of 4-stroke and 6-stroke diesel engines.
- **Trainee Engineer**, Birla Cement Works, Chittaurgarh
  August 2014 – May 2015
  - Supervised maintenance of Heavy Earth Moving Machines (HEMM).
  - Managed procurement and inventory of HEMM parts.

Thesis area and topic

Thesis area: Business Analytics and Machine Learning

Thesis Title: Verification and Validation of Business Simulation Models.

Thesis topic
First Study: Validation of System Dynamics Simulation Models Using an Inverse Problem Approach.

Second Study: Estimation of the Optimal Number of Topics in Latent Dirichlet Allocation Using Silhouette-Score-Based Clustering

Manuscripts in Preparation

- Danish, S., Ranjan, P. and Gotherwal, D. (2026) "Post-Grant Patent Vulnerability in India: An Empirical Analysis of Litigation and Renewal Outcomes".
- Gotherwal D., and Ranjan, P., Validation of System Dynamics Simulation Models Using an Inverse Problem Approach.
- Gotherwal D., and Ranjan, P., Clustering-Based Enhancement of Topic Identification in Latent Dirichlet Allocation Models.

Teaching Interests

- Business Analytics
- System Dynamics
- Discrete event simulations
- Programming for Analytics (Python, R)

Research Interests

- Validation and verification of simulation models for business and managerial decision-making
- Application of Artificial Intelligence and Machine Learning techniques in business analytics and management contexts

Publications

- Gotherwal, D., Ranjan, P., & Lekivetz, R. (2026). Systematic Literature Review of Verification and Validation of Simulation Models in Business and Manufacturing Using Topic Modelling. Journal of Contemporary Business Research.
- Agrawal C., Gotherwal D., Singh C., & Singh C. (2017). "Effect of surface thickness on the wetting front velocity during jet impingement surface cooling." *Heat and Mass Transfer Journal*, Springer. DOI: 10.1007/s00231-016-1855-9

Conferences

- Gotherwal D. (2023). "Modelling Risk Propagation in a Sustainable Food Supply Chain." Society of Operations Management (SOM) Conference, IIM Shillong.
- Gotherwal D., Ranjan P. (2025). "Systematic Literature Review of Validation and Verification of Simulation Models in Business and Manufacturing using Topic Modelling and Scientometric Analysis." EURO Conference 2025, University of Leeds, UK.

Project Work

- **B.E. Project:** Designed an experimental setup to optimize jet flow rates for cooling hot flat surfaces of varying thickness.
- **M.E. Thesis:** Developed a supply risk modeling approach using Bayesian Belief Networks.
- **B.Sc. Projects:**
  - **Modern App Development I:** Library management system using Flask, HTML, Jinja, and SQL-Alchemy. Grade: A
  - **Modern App Development II:** Advanced library management system with Flask, JavaScript, Vue.js, Celery, Redis, Flask-Restful. Grade: S
  - **Business Data Management:** Analytics on inventory/workforce for a cosmetics retailer. Grade: A
  - **Machine Learning Project:** Classification models for System Threat Forecaster. Grade: S

Workshops

- **Code, Commit, Collaborate: Hands-on with Git & GitHub** Jan 2026
  Successfully completed an intensive hands-on workshop focused on version control using Git and collaborative software development using GitHub. Gained practical experience in branching strategies, pull requests, merge conflict resolution, and team-based workflows. :contentReference[oaicite:0]index=0
- **Mathematical Foundations for Machine Learning** Apr–May 2025
  Completed a foundational workshop covering the mathematical principles behind machine learning, including linear algebra, probability theory, calculus, and optimization techniques essential for understanding modern ML algorithms. :contentReference[oaicite:1]index=1
- **Implementing Machine Learning Techniques using NumPy** Jan 2025
  Participated in a hands-on workshop focused on implementing core machine learning algorithms from scratch using NumPy, strengthening understanding of algorithm mechanics, numerical computation, and model building without high-level libraries. :contentReference[oaicite:2]index=2

Skills and Interests

- **Programming:** Python,R, Java, SQL, HTML, JavaScript
- **Tools:** Vensim, AnyLogic, Netica

- **Languages:** English (Bilingual), Hindi (Native)
- **Interests:** Swimming, Movies, Traveling