

Designation: **Associate Professor**

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## Profile

### Short Bio

Dr. Aritra Pan is Associate Professor at the Madras School of Economics. An applied AI and analytics researcher with a PhD in Trading Analytics from IIT Kharagpur, he brings over 13 years across academia, research, and industry – including a Lead Data Scientist role at PwC and faculty and area-chair positions at esteemed institutions like IMI Bhubaneswar, IIM Bodh Gaya, IFMR GSB (Krea), and IMT Ghaziabad. His work applies machine learning, NLP, and network methods to problems in finance, sustainability, education and management.

### Work Experience

- Associate Professor of Data Science and PGDM programmes at Madras School of Economics (*Present*)
- Assistant Professor, Chairperson (Information Management and Analytics Area) and Chairperson (IT Infrastructure and Cybersecurity), IMI (International Management Institute) Bhubaneswar
- Assistant Professor, IT Systems and Analytics, Indian Institute of Management (IIM) Bodh Gaya
- Assistant Professor, Data Science and Information Systems, IFMR Graduate School of Business, Krea University
- Chairperson and Assistant Professor, Business Analytics Area (Chairperson, Information Technology and Analytics Area), Institute of Management Technology (IMT), Ghaziabad
- Manager (Analytics) and Lead Data Scientist, Management Consulting (Advisory), PricewaterhouseCoopers (PwC), Kolkata
- Graduate Teaching Assistant, Vinod Gupta School of Management (VGSOM), Indian Institute of Technology (IIT) Kharagpur
- Software Engineer, RS Software, Kolkata
- Lecturer Assistant Professor, Computer Science, Syamaprasad Institute of Technology and Management (SITM), Kolkata (under WBUT/MAKAUT)
- Lecturer Assistant Professor, Computer Science and Engineering, Institute of Engineering and Management (IEM), Kolkata (under WBUT/MAKAUT)

## **Education**

- Ph.D. in Business Analytics, (Full Time, with Institute/MHRD Scholarship), Vinod Gupta School of Management, Indian Institute of Technology Kharagpur, 2017 (Awarded 2018)
- M.Tech. in Soft Computing (Information Technology), Indian Institute of Engineering Science and Technology, Shibpur, 2012
- B.E. in Computer Science and Technology, Indian Institute of Engineering Science and Technology, Shibpur, 2008

## **Publications**

### **Referred Journals and Cases**

- Pan, A., Mukhopadhyay, S., Banerjee, S., & Sanyal, P., (2025), "Mapping the luxury fashion marketing research landscape: a BERT-based topic modelling approach", Journal of Business Analytics (Taylor and Francis, Impact Factor: 1.6, 2024 Impact Factor: 1.5, Cite Score: 3.7, Scopus Q2, ABDC C), 2025, Link: <https://www.tandfonline.com/doi/full/10.1080/2573234X.2025.2599770>.
- Ray, S., Pan, A., Shukla, A., & Rastogi, S. K., (2025), "Mapping and decoding green finance research: themes and topic interconnections using a multi-method approach", International Journal of Productivity and Performance Management (Emerald, Impact Factor: 4.1, 2024 Impact Factor: 3.5, Cite Score: 11.6, Scopus Q1, ABDC B), 2025, Link: <https://www.emerald.com/ijppm/article-abstract/doi/10.1108/IJPPM-08-2024-0557/1278937/Mapping-and-decoding-green-finance-research-themes>.
- Banerjee, S., Pan, A., (2024), "From Colonial Legacies to Linguistic Inclusion: A BERTopic Enhanced Bibliometric Insight into Global South Higher Education", IEEE Access (IEEE, Impact Factor: 3.4, 2023 Impact Factor: 3.9, Cite Score: 9.8, Scopus Q1), 2024, Link: <https://ieeexplore.ieee.org/abstract/document/10643545/>.
- Das, S., Pan, A., and Jain, N. K., (2023), "Investigating the multi-scaling properties and connectedness of the sovereign bond yields: Hurst exponent and network analysis approach", Heliyon (Cell Press, Impact Factor: 4.0, Cite Score: 5.6, Scopus Q1), 2023, Link: <https://doi.org/10.1016/j.heliyon.2023.e16666>.
- Pan, A., Misra A. K., (2022), "Carry-forward modeling for high frequency limit-order executions: an emerging market perspective", American Business Review (University of New Haven, A Category in ABDC Ranking List, Scopus Indexed), 2022, Link: <https://digitalcommons.newhaven.edu/americanbusinessreview/vol25/iss1/7/>.
- Pan, A., and Misra A. K., (2021), "A Comprehensive Study on Bid-Ask Spread and its Determinants in India", Cogent Economics and Finance (Taylor & Francis, B Category in ABDC Ranking List, Scopus Indexed, WOS ESCI Indexed), 2021, Link: <https://www.tandfonline.com/doi/full/10.1080/23322039.2021.1898735>.

- Pan, A., and Misra A. K., (2020), “Assessment of Asymmetric Information Cost in Indian Stock Market: A Sectoral Approach”, Global Business Review (Sage, B Category in ABDC Ranking List, Scopus Indexed), 2020, Link: <https://doi.org/10.1177/0972150919865085>.
- Pan, A., Mukhopadhyay, S., and Samanta, S., (2022), “Liver Disease Detection: A Review of Machine Learning Algorithms and Scope of Optimization”, International Journal of Healthcare Information Systems and Informatics, (IGI Global, C Category in ABDC Ranking List, Scopus Indexed), 2022, Link: <https://www.igi-global.com/article/liver-disease-detection/316666>.
- Pan, A., and Misra A. K., (2018), “ASYMMETRIC INFORMATION DURING MERGER: A CASE OF SBI”, ET Cases, Economic Times, Link: <https://www.etcases.com/asymmetric-information-during-merger-a-case-of-sbi.html>.

### **Invited Lectures, Workshops and Talks**

- Workshop on “Data and Business Analytics” for AGM and Managers of Reserve Bank of India at Bhubaneswar Regional Office, August 2023, LinkedIn Link: [https://www.linkedin.com/posts/aritrapan\\_rbiworkshop-analyticsexcellence-activity-7100768521491496960-eNKP](https://www.linkedin.com/posts/aritrapan_rbiworkshop-analyticsexcellence-activity-7100768521491496960-eNKP)
- Guest Lecture on “Big Data Analytics” at Ravenshaw University, September 2023, LinkedIn Link: [https://www.linkedin.com/posts/aritrapan\\_ravenshawuniversity-analyticsworkshop-bigdata-activity-7103319659113820160-3a8W/](https://www.linkedin.com/posts/aritrapan_ravenshawuniversity-analyticsworkshop-bigdata-activity-7103319659113820160-3a8W/)
- Management Masterclass on “Introduction to Business Analytics” by IMS India, Youtube Link: <https://www.youtube.com/watch?v=lwMUlcZ9Reo>

### **Conferences**

- Pan, A., Shukla, A., & Ray, S. (2024). Identifying Themes and Research Clusters in Green Finance using Language Transformers (BERT) and Topic Recommendation System. 9th PAN IIM World Management Conference, IIM Sambalpur, 22 - 24 January 2024
- Pan, A., Mukhopadhyay, S., & Banerjee, S. (2023). What after Bibliometric? Recommending topics for research in Luxury Fashion Marketing: A Topic Recommendation Approach. Accepted for Presentation at 56th Annual Convention of Operational Research Society of India (2023-ORSI) and 10th International Conference on Business Analytics and Intelligence (2023-ICBAI), December 2023, IISc Bangalore
- Pan, A., Sanyal, P., & Mandal, S. (2023). Identifying Themes and Research Clusters in Neuromarketing using Language Transformers (BERT) and Topic Recommendation System. Presented at 3rd International Business Analytics Conference by K J Somaiya Institute of Management, Somaiya Vidyavihar University (SVU), Mumbai with New Jersey City University (NJCU), March 2023. Invited for submission in the journal Management Decision (Category B in ABDC and indexed by Scopus)
- Pan, A., & Banerjee, S. (2023). A Topic Recommendation Approach for Luxury Fashion Marketing Research Beyond Bibliometric. 9th International Conference on the

'Global Business Environment,' presented in collaboration with EGADE Business School del Tecnológico de Monterrey, December 15-16, 2023.

- Pan, A., Banerjee, S., & Bharadwaja, M. (2023). Decoding Persuasive Appeals: A Focus Group Study in Management Instruction. 9th International Conference on the 'Global Business Environment,' presented in collaboration with EGADE Business School del Tecnológico de Monterrey, December 15-16, 2023.
- Das, S., Pan, A. (2023). "Investigating the multi-scaling properties and connectedness of the sovereign bond yields: Hurst exponent analysis approach", 5th INTERNATIONAL CONFERENCE ON BANKING AND FINANCE, IMI Bhubaneswar, Bhubaneswar
- Parhi, S., and Pan, A. (2022). "Evaluation of Socio-Environmental Factors for Green Supply Chain Management", INTERNATIONAL CONFERENCE ON GLOBAL BUSINESS ENVIRONMENT 2022, IMI Bhubaneswar
- Mukhopadhyay, S., Pan, A. and Samanta, S., "Liver Disease Detection Using Machine Learning: Efficient Algorithm Selection", Management Doctoral Colloquium 2020, Indian Institute of Technology Kharagpur
- Pan, A., Misra, A. K., "Asymmetric Information During Merger: A Case of SBI", INTERNATIONAL CONFERENCE ON FINANCIAL MARKETS AND CORPORATE FINANCE 2017, IIT Kharagpur
- Pan, A., "Characteristics of High Frequency Trading – A Study on NSE", Management Doctoral Colloquium 2017, Indian Institute of Technology Kharagpur
- Pan, A., "High frequency determinants of spread: A study in selected Nifty50 stocks", Management Doctoral Colloquium 2016, Indian Institute of Technology Kharagpur
- Pan, A., Shankar, A., Titiyal, R., "Changing Dimensions of E-Recruitment: A Roadmap Ahead", Management Doctoral Colloquium 2015, Indian Institute of Technology Kharagpur

### **Seminar Attended**

- Image Classification and Pattern Recognition, 2009, Department of Computer Science, Vidyasagar University, Midnapur, West Bengal, India.
- CII Smart HR Summit on Role of Technology in Transforming the Workplace, 2019, Hotel Crowne Plaza, New Delhi (As IMT Ghaziabad Nominated Academic Expert)

## **Teaching**

Teaching Courses at Madras School of Economics in M.Sc. (Data Science) and PGDM programmes:

1. Statistics with R
2. Introduction to Artificial Intelligence

3. Programming in SQL
4. Introduction to Data Science
5. Large Language Models

## **Current Research**

- Financial markets & resilience – network and volatility analytics on algorithmic and emerging markets
- Sustainability & greenwashing – LLMs and text mining on corporate climate claims
- Energy & commodity markets – network models on cross-market linkages
- Management education – analytics and AI for workforce and curriculum futures
- AI in healthcare – applied frameworks for integrative health