Shailender Joseph
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RESEARCH INTERESTS

Topics: Real-time bidding, platform design, cyberinsurance, and AI-enabled decision systems
Methods: Game theory, optimization, stochastic control, machine learning, and reinforcement learning

EDUCATION

The University of Texas at Dallas, Richardson, TX, USA, 2021–Present
- Ph.D. in Information Systems, 2027 (expected)

Chennai Mathematical Institute, Chennai, India, 2019–2021
- M.Sc. in Data Science, CGPA: 9.28/10

BITS-Pilani, Hyderabad Campus, Hyderabad, India, 2011–2018
- Ph.D. in Drug Delivery and Pharmacokinetics, 2018 (awarded)

BITS-Pilani, Pilani Campus, Pilani, India, 2005–2011
- M.Pharm (with specialization in Pharmaceutics), CGPA: 8.03/10, 2009–2011
- B.Pharm (Hons.), CGPA: 7.78/10, 2005–2009

PROFESSIONAL EXPERIENCE

- Professional Development Program (PDP) Scientist, Pfizer Healthcare India Private Limited, Chennai, India, 2017–2019

RESEARCH PAPERS

Working Papers
- **Shailender Joseph**, Milind Dawande, Ganesh Janakiraman, and Vijay Mookerjee. "Win-Curves in Real-Time Bidding: A Micro-Foundation" (SSRN). Submitted to ***Decision Sciences***
- **Shailender Joseph**, Kai Sun, Ganesh Janakiraman, and Vijay Mookerjee. "Reimagining Digital Markets: Evaluating Platform Dominance and Network Alternatives." Presented at ***CIST 2025***

Work in Progress
- **Shailender Joseph**, Ganesh Janakiraman, and Vijay Mookerjee. "Competing for Space and Participation: Dynamic Control of Digital Out-of-Home RTB Platforms". *Manuscript in preparation*
- **Shailender Joseph**, Ganesh Janakiraman, and Vijay Mookerjee. "Making Cyberinsurance Accessible: Design and Evaluation of a Novel Approach to Determine Cyberinsurance Premiums." *Analysis underway*

Recently Initiated Research
- Shailender Joseph, Aditya Karanam, Ganesh Janakiraman, and Vijay Mookerjee "Retrieve or Reason? Cost-Effective Routing in Hybrid AI Chatbots." *Dataset obtained*

CONFERENCE PRESENTATIONS

"Win-Curves in Real-Time Bidding: A Micro-Foundation"
- CIST 2024, Seattle, WA
- INFORMS 2024, Seattle, WA
- Big XII+ MIS Research Symposium 2025, Ames, IA
- POMS 2025, Atlanta, GA

"Reimagining Digital Markets: Evaluating Platform Dominance and Network Alternatives"
- CIST 2025, Atlanta, GA
- INFORMS 2025, Atlanta, GA
- DSI 2025, Orlando, FL

TEACHING EXPERIENCE

Instructor of Record

- ITSS **4381 Object-Oriented Programming with Python** – Fall 2024, 2025, and Summer 2026
- Student evaluation: **4.75/5.00** (Fall 2024)

Teaching Assistant (Selected Courses)

- BUAN 6342 Applied Natural Language Processing (Prof. Harpreet Singh), Spring 2023, 2025
- BUAN 6V99 Special Topics in Business Analytics (Prof. Harpreet Singh), Spring 2025
- BUAN 6382 Applied Deep Learning (Prof. Harpreet Singh), Fall 2022
- MIS 6313 Managing IT in the Analytics Age (Prof. Vijay Mookerjee), Fall 2022
- MIS 6308 Systems Analysis and Project Management (Prof. Raghunathan S), Fall 2021
- BUAN 6341 Applied Machine Learning (Muhammad Sabir), Summer 2022

HONORS AND AWARDS

- Graduate Research Fellowship, The University of Texas at Dallas, 2021–2022
- Graduate Studies Scholarship, The University of Texas at Dallas, 2021–Present
- Best Research Scholar Award, Sponsored by Bharat Biotech, 2016–2017
- Best poster presentation, PEAR–2017, JNTU Hyderabad, 2017
- Senior Research Fellowship (SRF), CSIR, 2013–2017

PUBLICATIONS FROM PRIOR PH.D.

- **Shailender Joseph**, Punna Rao Ravi, Mrinalini Reddy Sirukuri, Avantika Dalvi, Odapalli Keerthi Priya. *Drug Development and Industrial Pharmacy*, 2018; 44:1109–19.
- **Shailender Joseph**, Punna Rao Ravi, Paramita Saha, Avantika Dalvi, and Srividya Myneni. *Colloids and surfaces B: Biointerfaces*, 2017; 158:610–9.
- **Shailender Joseph**, Punna Rao Ravi, Paramita Saha, and Srividya Myneni. *Xenobiotica*, 2017; 47:1104–11.
- Punna Rao Ravi, **Shailender Joseph**, Uday Sai Ranjan Avula, and Shruthi Anthireddy. *Acta Chromatographica*, 2015; 27:597–612.
- Punna Rao Ravi, Rahul Vats, **Shailender Joseph,** and Nitin Gadekar. *Acta Chromatographica*, 2015; 27:281–94.

SERVICE

- Conference Volunteer, BizAI 2024, 2025, and 2026
- Vice President of Membership**,** Ph.D. Social Club**,** 2022–2024

PH.D. COURSEWORK

- **IS Seminar Courses:** Game-theoretical Models (Prof. Srinivasan Raghunathan and Prof. Huseyin Cavusoglu), Topics in Industrial Organization, Empirical Methods, and Algorithmic Bias (Prof. Jianqing Chen and Prof. Amit Mehra), Empirical Methods and Causal Inference (Prof. Eric Zheng), Stochastic Control Theory (Prof. Vijay Mookerjee), IS Design Science Models and Knowledge Management (Prof. Sumit Sarkar), Linear and Integer Programming (Prof. Syam Menon)
- **Methodological Courses:** Advanced Managerial Economics, Game Theory, Advanced Statistics and Probability, Optimization, Probability and Stochastic Process, Deterministic Models in Operations Research, Information Economics and Mechanism Design

SELECTED MACHINE LEARNING PROJECTS — CHENNAI MATHEMATICAL INSTITUTE

- **Computer Vision:** Developed object-detection and image-localization models for abnormalities in the VinBigData chest X-ray dataset; built CNN classifiers for sign-language digits and

emotion recognition, using Bayesian optimization for hyperparameter tuning.

- **Natural Language Processing:** Preprocessed the CORD-19 corpus and developed language models, knowledge graphs, and a character-level recurrent neural network.
- **Reinforcement Learning:** Designed a TD-SARSA agent for optimal pathfinding.
- **Predictive Modeling and Data Mining:** Built decision-tree, naive Bayes, and support-vector-machine classifiers for the Bank Marketing dataset using 10-fold cross-validation; implemented Apriori frequent-itemset mining with fixed and multiple minimum-support thresholds.

SKILLS

- **Programming Skills:** Python, R, SQL, MATLAB
- **Other:** Excel, Mathematica, LaTeX

REFERENCES

Vijay Mookerjee
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