Tian Li

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Education

Tongji University, Shanghai, China *Sept 2013 – May 2018*
Automotive Engineering B.Sc.

RWTH Aachen University, Aachen, Germany *Oct 2018 – May 2022*
Computer Science M.Sc.

RWTH Aachen University, Aachen, Germany *Sep 2023 – Present*
The University of Melbourne, Melbourne, Australia
Joint PhD student supervised by Prof Sander J.J. Leemans and A/Prof Artem Polyvyanyy
Research topic: Seeing the Forest for the Trees - Stochastic Process Discovery

Research Fields

Business process management (BPM) is a discipline that studies methods, techniques, and tools for modeling, analyzing, and improving business processes within companies and organizations. A business process, the core artifact of study in BPM, can be understood as a collection of activities and decisions performed by humans that aim to achieve a goal. My research topic, stochastic process discovery, primarily focuses on explicitly considering the frequency and probability of business process data and designing new methods in an open-source BPM framework.

Experience

Working Student *Jun 2021 – Jun 2022*
Institute for Automation of Complex Power Systems, RWTH Aachen University
- Construct data model for building energy system
- Process building energy data from industrial partner and deploy code to server

Research Assistant *Jun 2022 – Mar 2023*
Chair of Process and Data Science, RWTH Aachen University
- Implement a process alignment approach for bottlenecks detection
- Develop an approach for BPM compliance checking

Research Assistant *Sept 2023 – Present*
The Business Process Management Group, RWTH Aachen University
- Develop and maintain an open-source BPM framework (https://bpm.rwth-aachen.de/ebi)
- Teach course Fundamentals of Business Process Management and seminar Frequencies in Process Mining

Joint PhD - Exchange Semesters *Mar 2024 – Jul 2024*
Process Science and Technology Group, The University of Melbourne *Feb 2025 - Jul 2025*
- Work directly with supervisor to refine research direction
- Schedule and coordinate bi-weekly group meetings

Publications

Stochastic Process Mining ↗ *Aug 2025*
23rd International Conference on Business Process Management (BPM 2025), Seville, Spain
Tian Li

Stochastic Alignments: Matching an Observed Trace to Stochastic Process Models *Aug 2025*
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23rd International Conference on Business Process Management (BPM 2025), Seville, Spain
Tian Li, Artem Polyvyanyy, Sander J.J. Leemans

The Jensen-Shannon Distance for Stochastic Conformance Checking ↗ *Oct 2024*
6th International Conference on Process Mining (ICPM 2024), Copenhagen, Denmark
Tian Li, Sander J.J. Leemans, Artem Polyvyanyy

Ebi - a Stochastic Process Mining Framework ↗ *Oct 2024*

6th International Conference on Process Mining (ICPM 2024), Copenhagen, Denmark

Sander J.J. Leemans, Tian Li, Jan Niklas van Detten

Stochastic Process Discovery: Can it be Done Optimally? ↗ *Jun 2024*

36th International Conference on Advanced Information Systems Engineering (CAiSE 2024), Limassol, Cyprus

Sander J.J. Leemans, Tian Li, Marco Montali, Artem Polyvyanyy

Checking Constraints for Object-Centric Process Executions ↗ *Oct 2023*

5th International Conference on Process Mining (ICPM 2023), Rome, Italy

Tian Li, Gyunam Park, Wil van der Aalst

Cache Enhanced Split-Point-Based Alignment Calculation ↗ *Oct 2022*

4th International Conference on Process Mining, (ICPM2022), Bozen-Bolzano, Italy

Tian Li, Sebastiaan J. van Zelst