Stylianos Loukas Vasileiou

Department of Computer Science & Engineering
James McKelvey School of Engineering
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Research Interests

Human-Aware AI, Human-AI Interaction, Explanation, Logic.

Education

Ph.D. in COMPUTER SCIENCE   2018-2024 (Expected)
Thesis (tentative): The Art of Explanation: From Logic to Human-Aware AI Agents
Advisor: Prof. William Yeoh
Washington University in St. Louis, U.S.A

M.Sc. in ARTIFICIAL INTELLIGENCE   2016-2017
Thesis: *Asthma Attack Prediction: A Machine Learning Approach*
Advisor: Prof. Long Tran-Thanh
University of Southampton, U.K

M.Sc. in APPLIED MATHEMATICS   2015-2016
Thesis: *Feedback between Mechanical Contraction and Electrical Excitation in Cardiac Cells*
Advisor: Prof. Radostin Simitev
University of Glasgow, U.K

B.Sc. in STATISTICS AND ACTUARIAL- FINANCIAL MATHEMATICS   2010-2014
Thesis: *Mathematical Modeling of Micro-Electromechanical Systems*
Advisor: Prof. Nikolaos Kavalaris
University of the Aegean, Greece

Preprints

1. Stylianos Loukas Vasileiou, William Yeoh, Alessandro Previti, and Tran Cao Son. *On Generating Monolithic and Model Reconciling Explanation in Probabilistic Scenario*.

2. Yinxu Tang, Stylianos Loukas Vasileiou and William Yeoh. *Approximating Human Mental Models During Argumentation-based Dialogues*.

3. Stylianos Loukas Vasileiou and William Yeoh. *Explanation-based Belief Revision: Moving Beyond Minimalism to Explanatory Understanding*.

Publications

Journal Articles

1. Stylianos Loukas Vasileiou, William Yeoh, Tran Cao Son, Ashwin Kumar, Michael Cashmore, and Daniele Magazzeni. A logic-based explanation generation framework for classical and hybrid planning problems. *Journal of Artificial Intelligence Research (JAIR)*, 2022

Conference Papers

7. Stylianos Loukas Vasileiou and William Yeoh. Please: Generating personalized explanations in human-aware planning. In *European Conference on Artificial Intelligence (ECAI)*, 2023

6. Stylianos Loukas Vasileiou, Xu Borong, and William Yeoh. A logic-based framework for explainable agent scheduling problems. In *European Conference on Artificial Intelligence (ECAI)*, 2023

5. Ashwin Kumar, Stylianos Loukas Vasileiou, Melanie Bancilhon, Alvitta Ottley, and William Yeoh. Vizxp: A visualization framework for conveying explanations to users in model reconciliation problems. In *International Conference on Automated Planning and Scheduling (ICAPS)*, 2022

4. Stylianos Loukas Vasileiou, Alessandro Previti, and William Yeoh. On exploiting hitting sets for model reconciliation. In *AAAI Conference on Artificial Intelligence (AAAI)*, 2021

3. Son Tran Cao, Van Nguyen, Stylianos Loukas Vasileiou, and William Yeoh. Model reconciliation in logic programs. In *European Conference on Logics in AI (JELIA)*, 2021

2. Son Tran Cao, Van Nguyen, Stylianos Loukas Vasileiou, and William Yeoh. Conditional updates of logic programs and its applications (poster presentation). In *International Conference on Principles of Knowledge Representation and Reasoning (KR)*, 2020

1. Van Nguyen, Stylianos Loukas Vasileiou, Son Tran Cao, and William Yeoh. Explainable planning using answer set programming. In *International Conference on Principles of Knowledge Representation and Reasoning (KR)*, 2020

Workshop Papers (Peer-Reviewed)

6. Stylianos Loukas Vasileiou, Ashwin Kumar, William Yeoh, Son Tran Cao, and Francesca Toni. Dr-hai: Argumentation-based dialectical reconciliation in human-ai interactions. In *International Joint Conference on Artificial Intelligence (IJCAI) Workshop on Explainable AI*, 2023

5. Andrew Estornell, Stylianos Loukas Vasileiou, William Yeoh, and Daniel Borrajo. Predicting customer goals in financial institution services: A data-driven lstm approach. In *International Conference on Automated Planning and Scheduling (ICAPS) Workshop on Financial Planning*, 2023

4. Stylianos Loukas Vasileiou, Ashwin Kumar, and William Yeoh. On generating personalized explanations via knowledge forgetting. In *International Joint Conference on Artificial Intelligence (IJCAI) Workshop on XAI*, 2022

3. Stylianos Loukas Vasileiou, William Yeoh, Son Tran Cao, and Alessandro Previti. Explanations as model reconciliation via probabilistic logical reasoning. In *Conference on Principles of Knowledge Representation and Reasoning (KR) Workshop on Explainable Logic*, 2021

2. Stylianos Loukas Vasileiou, William Yeoh, and Tran Cao Son. On the relationship between kr approaches for explainable planning. In *International Conference on Automated Planning and Scheduling (ICAPS) Workshop on XAIP*, 2020

1. Stylianos Loukas Vasileiou, Son Tran Cao, and William Yeoh. A preliminary logic-based approach for explanation generation. In *International Conference on Automated Planning and Scheduling (ICAPS) Workshop on Explainable AI Planning*, 2019

Advising

MASTERS STUDENTS

- Ruoyao Yang, MSc. in Computer Science, WashU   2020
  Project: *Visualizations in Explainable Planning*

UNDERGRADUATE STUDENTS

- Benjamin Watkins, BSc. in Computer Science, WashU   2023-
  Project: *Explainable Re-Scheduling with Fairness Guarantees*

- Bob Xiao, BSc. in Computer Science, WashU   2023
  Project: *Goal Prediction in Financial Settings*

- Borong Xu, BSc. in Computer Science, WashU   2022-2023
  Project: *Explainable Scheduling*

Service

ORGANIZING COMMITTEE

- International Conference on Automated Planning and Scheduling (ICAPS) Workshop on Human-Aware and Explainable Planning (HAXP)   2023, 2024

- International Conference on Automated Planning and Scheduling (ICAPS) Workshop on Explainable AI Planning (XAIP)   2021-2022

PROGRAM COMMITTEE/REVIEWER

- Association for the Advancement of Artificial Intelligence (AAAI)   2024

- European Conference on Artificial Intelligence (ECAI)   2023

- International Joint Conference on Artificial Intelligence (IJCAI)   2023, 2024

- International Conference on Autonomous Agents and Multiagent Systems (AAMAS)   2020, 2023, 2024

- International Conference on Automated Planning and Scheduling (ICAPS)   2022, 2024

- Artificial Intelligence Journal (AIJ)   2023

- International Joint Conference on Artificial Intelligence (IJCAI) Workshop on Explainable AI (XAI)   2023, 2024

- International European Conference on Artificial Intelligence (ECAI) Workshop on Trustworthy Sequential Decision-making and Pptimization (TSDO)   2024

- International Conference on Automated Planning and Scheduling (ICAPS) Workshop on Explainable AI Planning (XAIP)   2020

OTHER ACTIVITIES

- We Belong CS@WashU: Talk on *Introduction to AI*   Sep. 2021

- We Belong CS@WashU: Talk on *Game Playing AI*   Jan. 2020

- We Belong CS@WashU: Member of the organization team   Jan. 2020

- Parkway North High School (St. Louis, MO): Workshop on *Introduction to AI*   Nov. 2019