Hang YU

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EDUCATION

Tufts University — Boston, U.S.

Ph.D of Computer Science — 09/2019-Present

Master of Computer Science

Overall GPA: 3.93

Relevant Courses: Algorithms (A), Social Assistive Robotics (A), Principles Data Sci in Python (A),

Yantai University — Yantai, China

Bachelor of Engineering in Computer Science and Technology — 09/2015-07/2019

Awards: National First Prize (**Top 0.5%**), Lan Qiao Programming Competition, 05/2016

PUBLICATIONS

Hang Yu, Kat Allen, Reuben Aronson Elaine Schaertl Short. "*From ``Thumbs Up'' to ``10 out of 10'': Reconsidering Scalar Feedback in Interactive Reinforcement Learning*". Under reviewing, **IROS 2023.**

Hang Yu, Elaine Schaertl Short. "*Learning with Dynamic Feedback*". **RSS workshop** "Closing the Academia to Real-World Gap in Service Robotics" 2020.

Tan, Zheng, **Hang Yu**, Wei Wei, and Jinglei Liu. "*Top-K interesting preference rules mining based on MaxClique*." **Expert Systems with Applications** 143 (2020): 113043.

YU Hang, WEI Wei, TAN Zheng, LIU Jing-lei. "*Contextual Preference Collaborative Measure Framework Based on Belief System*." **Computer Science**, 2020, 47(4): 74-84.

TAN, Zheng, JingLei LIU, and **Hang YU**. "*Conditional preference mining based on Max Clique*." **Journal of computer Applications** 11 (2017): 13.

ACADEMIC EXPERIENCES

Research Assistant, **Tufts AABL Lab, Tufts University** — Boston, U.S.

Fields: *Human-robot interaction, Robot Learning* — 08/2019-Present

- Presented STEADY algorithm that enables a reinforcement learning agent to detect and compensate for variation over time in feedback from an emotional human teacher.
- Working on developing an active learning algorithm using rich feedback. Rich feedback contains multiple pieces of feedback to increase information gain in each interaction. The Active learning algorithm can automatically request suitable feedback to maximize the performance.
- Designing a method that enables robots to learn the constraints of a task from human feedback.

Research Assistant, **Data Mining Research Group, Yantai University** — Yantai, China

Fields: *Data Mining, Preference Ranking, Heuristic Algorithms* — 08/2017-06/2019

- Proposed an algorithm that efficiently mines condition preferences based on the properties of maximal clique and condition preference.
- Designed a new metric that collaboratively decides the interesting degree of rules based on both similarity and deviation degree using pre-mined common preferences
- Presented a self-aggregation algorithm to aggregate preference sets while preserved most information

Undergraduate Dissertation, **Yantai University**

Fields: *Preference Ranking, Belief System* — Yantai, China

- Proposed an updated Belief System that allows users to preserve their individual *soft beliefs* against the Belief System and vote a common set of *hard beliefs*. — 04/2017-07/2017
- Optimized the measurement mechanism and enabled multiple methods that can be applied based on the feature of data sets to obtain high-quality Top-*K* preferences
- Representation at China Conference on Machine Learning 2017

EXTRACURRICULAR ACTIVITIES

Lab Leader, **Lan Qiao Programming Competition Lab** — 12/2015-05/2018

Vice President, **Photography Association of Yantai University** — 04/2016-12/2017

Team Leader, **Summer Social Practice Project of Yantai University** — 07/2016-08/2016

Project sponsor, **Phoenix Gaming Studio** — 03/2016-11/2016

SKILLS & Research Interests

Programming Skills: C/C++ (6 yrs); Python (2 yrs); Matlab (1 yr); Pascal (3 yrs);

Research Interests: Human Robot Interaction, Interactive Learning, Reinforcement Learning, Deep Learning, Data Mining, Random Algorithm, Heuristic Algorithm