

Zizhao Wang

Email zizhao.wang@utexas.edu

Education

- 2020 - TBD** The University of Texas at Austin
PhD in Electrical and Computer Engineering (advisor: Peter Stone), GPA: 4.00/4.00
- 2018 - 2019** Columbia University
MS in Computer Science, GPA: 4.00/4.00
- 2016 - 2018** The University of Michigan - Ann Arbor
BS in Computer Engineering, GPA: 3.96/4.00
- 2014 - 2018** Shanghai Jiao Tong University
BS in Electrical and Computer Engineering, GPA: 3.72/4.00

Publications

- Causal Dynamics Learning for Task-Independent State Abstraction (Oral), *ICML 2022*
Zizhao Wang, Xuesu Xiao, Zifan Xu, Yuke Zhu, and Peter Stone.
- Task-Independent Causal State Abstraction, *NeurIPS 2021, robot learning workshop*
Zizhao Wang, Xuesu Xiao, Yuke Zhu, and Peter Stone.
- From Agile Ground to Aerial Navigation: Learning from Learned Hallucination, *IROS 2021*
Zizhao Wang, Xuesu Xiao, Alexander J Nettekoven, Kadhiravan Umasankar, Anika Singh, Sriram Bommakanti, Ufuk Topcu, and Peter Stone.
- CLAMGen: Closed-Loop Arm Motion Generation via Multi-view Vision-Based RL, *IROS 2021*
Iretiayo Akinola*, **Zizhao Wang***, and Peter Allen.
- APPLE: Adaptive Planner Parameter Learning from Evaluative Feedback, *RAL 2021*
Zizhao Wang, Xuesu Xiao, Garrett Warnell, and Peter Stone.
- APPLR: Adaptive Planner Parameter Learning from Reinforcement, *ICRA 2021*.
Zifan Xu, Gauraang Dhamankar, Anirudh Nair, Xuesu Xiao, Garrett Warnell, Bo Liu, **Zizhao Wang**, and Peter Stone.
- Maximizing BCI Human Feedback using Active Learning, *IROS 2020*
Zizhao Wang*, Junyao Shi*, Iretiayo Akinola*, and Peter Allen.
- Accelerated Robot Learning via Human Brain Signals, *ICRA 2020*.
Iretiayo Akinola*, **Zizhao Wang***, Junyao Shi, Xiaomin He, Pawan Lapborisuth, Jingxi Xu, David Watkins-Valls, Paul Sajda, and Peter Allen.
- Variational Objectives for Markovian Dynamics with Backward Simulation, *ECAI 2020*
Antonio Khalil Moretti*, **Zizhao Wang***, Luhuan Wu*, Iddo Drori, and Itsik Pe'er.

Research

2021 - Present Causal Dynamics Learning
UT-Austin

- Designed a causal dynamics model of the world which only keeps necessary dependencies between state variables and the action, thus generalizing well to unseen states.
- Derived a state abstraction which not only improves sample efficiency but also applies to a wider range of tasks than existing state abstraction methods.

- | | |
|------------------------|---|
| 2020 -
2021 | <p>Adaptive Planner Parameter Learning
UT-Austin</p> <ul style="list-style-type: none"> Adapted planner parameters using learning methods with various human signals, improving the planner's navigation performance while inheriting its safety guarantees. |
| 2018 -
2019 | <p>Variational Inference for Time Series
Columbia University</p> <ul style="list-style-type: none"> Designed a variational objective based on particle smoothing, and the objective can learn the dynamic system and infer hidden states only based on observations. Enabled prediction for various nonlinear chaotic system and reduced the prediction error by 60% than previous methods. |

Honors and Awards

- | | |
|--|-------------------|
| <ul style="list-style-type: none"> Jackson and Muriel Lums Scholarship (top 5%) | <i>July. 2016</i> |
| <ul style="list-style-type: none"> Mathematical Contest in Modelling - Meritorious Winner (top 10%) | <i>Jan. 2016</i> |
| <ul style="list-style-type: none"> Kehui Scholarship (top 2%) | <i>Sept. 2014</i> |