# CHENLU YE

The Hong Kong University of Science and Technology

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## RESEARCH INTERESTS

- Reinforcement Learning Theory;
- Statistical Machine Learning.

## EDUCATION

**The Hong Kong University of Science and Technology**  *Hong Kong, China*
Ph.D. student, *Department of IIP (AI)*  *2021.9 - present*
Advisor: Prof. Tong Zhang and Prof. Kani Chen

**University of Science and Technology of China**  *Hefei, China*
Bachelor of Science, *Department of Statistics*
Ranking: Top 20% in Statistics.

Core courses: Stochastic Process(96), Linear Algebra 1-2 (95, 90), Real Analysis (95), Functional Analysis (90), Mathematical Statistics (93),Operations Research 1(97), Probability Theory (89), Computer Programming A (90)

## RESEARCH

**Adversarial Corruption in Reinforcement Learning with General Function Approximation**
*2022.9 - 2022.12*
**HKUST**
Advisor: Prof. Tong Zhang

- We developed a corruption-robust algorithm based on uncertainty weighting and the OFU principle for contextual bandits with general function approximation.
- We extended the framework to MDPs with general function approximation by combining uncertainty weighting and the $\mathcal{F}$-LSVI algorithm.
- Our algorithms enjoyed a nearly optimal bound for bandits, and first achieved an additive dependence on corruption level for MDPs.

**Provably Efficient Learning in High-Dimensional Batched Bandits**  *2020.3-2021.7*
**USTC**
Advisor: Prof. Zhaoran Wang from Northwestern University, Prof. Zhuoran Yang from Yale University

- We designed an efficient algorithm for high-dimensional linear contextual bandits with batched feedback.
- Our algorithm enjoyed nearly the same regret order as the sequential case.
- We extended the algorithm to low-rank matrix bandits.

**Recover Meaningful Representations from Bidirectional Generative Models**  *2021.5-2022.7*
**HKUST**
Advisor: Prof. Tong Zhang

- We expanded the existing identifiability theory of generative models to be suitable in wide applications.
- We presented a practical algorithm to solve the generative model formulation with auxiliary variables, which is analyzed in the proposed theory.
- We verified the identifiability result of the model on both artificial and real-world datasets.

## HONORS AND AWARDS

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| Gold Prize for Outstanding Student Scholarship (1/40) | *2020.9* |
| Bronze Prize for Outstanding Student Scholarship (Top 20%) | *2019.9* |
| Bronze Prize for Outstanding Student Scholarship (Top 20%) | *2018.9* |

## PROFESSIONAL ACTIVITY

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| Journal Reviewer: Machine Learning | *2021.11* |