YIXIAO LI

H. Milton School of Industrial and Systems Engineering
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RESEARCH INTEREST

My research focuses on applications of machine learning algorithms. I am interested in natural language processing (NLP) and circuit design via machine learning.

EDUCATION

2022 - present	Georgia Institute of Technology **Ph.D. in Machine Learning**
2018 - 2022	The University of Science and Technology of China (USTC) **B.Eng. in Electronic Information Engineering**

PUBLICATIONS

- **LoSparse: Structured Compression of Large Language Models based on Low-Rank and Sparse Approximation**
  Yixiao Li[*], Yifan Yu[*], Qingru Zhang, Chen Liang, Pengcheng He, Weizhu Chen and Tuo Zhao
  International Conference on Machine Learning (ICML), 2023

RESEARCH EXPERIENCES

2023.1 - present	**Code Generation through Reinforcement Learning**: Generate codes given a problem description and test cases. Apply reward learning from RLHF to model the quality of generated codes. Achieve a high pass rate on test cases and the generated codes are easy to read and efficient to execute.
2023.1 - present	**Adaptive Sampling for Antenna Calibration**: Reconfigure the settings of power amplifiers during the antenna calibration period for unknown VSWR. Use adaptive sampling to explore states (i.e., input power) and actions (i.e., PA settings) so as to estimate the best gain curve.
2022.8 - 2023.1	**Model Compression via Low Rank and Sparse Approximation**: Compress huge transformer models. Approximate the weights matrix with a low rank matrix and a sparse matrix. Achieve high compression rate while maintain competitive performance.
2022.8 - 2023.1	**Deep Learning Assisted End-to-End Synthesis for an RF/mmWave Network**: Design mm-wave circuits efficiently via machine learning methods. Predict the geometric parameters of circuit directly by the desired performance. Simplify the circuit design process for engineers, compared to traditional circuit design methods.

HONORS

2021.11	**Honorary Rank of Talent Program in AI in USTC (Top 1%)**

2020.9	*Zeng Hua* **Scholarship in USTC (Top 3%)**
2020.9	**Talent Student Gold Scholarship in USTC (Top 3%)**

TEACHING EXPERIENCES

Teaching Assistant:

- Computer Programming with C Language, Fall 2021
- Computational Data Analysis, ISYE 6740, Spring 2023

SKILLS

Programming: Python, PyTorch, C, Matlab, Swift

REFERENCES

Tuo Zhao   Assistant Professor
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