

Da Chang

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Education

Central South University - School of Automation - Bachelor

Sep 2020 - Jun 2024

Professional score: Weighted average score 89.1

Major courses: Data Structure (97), Image Processing (96), Python Programming (99)

University of Chinese Academy of Sciences - Shenzhen Institute of Advanced Technology - Doctorate

Sep 2024 - Jul 2029

GPA: 3.8/4.0

Major courses: Multimedia Analysis and Understanding (92), Evolutionary Computation (96), Social Computing and Social Network Analysis (91)

Publication

MGUP: A Momentum-Gradient Alignment Update Policy for Stochastic Optimization - The First Author

Jan 2025 - Jun 2025

This is my first work to be published during my doctoral studies. You can find all the information about the work at this link: <https://neurips.cc/virtual/2025/poster/117868>.

Research Overview: We propose MGUP, an efficient selective parameter update mechanism, a plug-and-play optimizer plug-in that accelerates and stabilizes large model training by scaling a fixed small fraction of parameters at each step and maintaining non-zero small steps for the remaining parameters. We also provide convergence guarantees under stochastic nonconvex optimization for MGUP-Adam.

Contribution: In this work, as the first author, I primarily accomplished the idea conception, all the experiments, and all the theoretical derivations.

Results: Thirty-Ninth Annual Conference on Neural Information Processing Systems (NeurIPS 2025) Spotlight

Mixed Text Recognition with Efficient Parameter Fine-Tuning and Transformer - The First Author

Mar 2024 - Jun 2024

This is an undergraduate graduation project. You can find all the information about the work at this link: [Mixed Text Recognition with Efficient Parameter Fine-Tuning and Transformer | SpringerLink](#)

Research Overview: We propose an OCR model for multiple scenarios—handwritten, printed, and scene text—based on the pre-training and fine-tuning paradigm, enhanced by PEFT. A mixed text dataset encompassing diverse image formats is constructed to support training. We introduce a hybrid textual OCR baseline and apply PEFT to fine-tune Transformer-based Vision-Language Models for the first time, mitigating the burden of large-scale parameter updates.

Contribution: In this work, as the first author, I completed the idea conception and carried out part of the experiments.

Results: Thirty-First International Conference on Neural Information Processing (ICONIP 2024) Poster

Self-evaluation

Personality: Treat things positive and serious, careful and responsible, treat people optimistic and gentle; Perseverance, hard work, like to meet new challenges.

Learning: Good at asking questions, finding problems and solving problems in learning, with strong analytical ability; Diligent, hardworking, practical ability is strong.