Zhengxuan Wei

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Education

ShanghaiTech University — Shanghai, China
B.Eng. Candidate, Computer Science and Technology — Sep.2022 - Present
GPA: **3.88/4.0** (Rank: **2/162**) | CET 4: **580** | CET 6: **537**

Publications

(* indicates equal contribution)

- **Augmenting Moment Retrieval: Zero-Dependency Two-Stage Learning**
  Zhengxuan Wei*, Jiajin Tang*, Sibei Yang†
  Accepted by International Conference on Computer Vision (ICCV) 2025
  We proposes AMR, which enhances moment retrieval by introducing Splice-and-Boost data augmentation and dual-path distillation, significantly improving boundary localization and semantic discrimination without relying on external data.
- **Closed-Loop Transfer for Weakly-supervised Affordance Grounding**
  Jiajin Tang*, Zhengxuan Wei*, Ge Zheng, Sibei Yang†
  Accepted by International Conference on Computer Vision (ICCV) 2025
  We proposes Loop-Trans, a closed-loop framework that bidirectionally transfers and refines affordance knowledge between exocentric and egocentric images via unified cross-modal localization and denoising distillation.
- **Sim-DETR: Unlock DETR for Temporal Sentence Grounding**
  Jiajin Tang*, Zhengxuan Wei*,Yuchen Zhu, Cheng Shi, Guanbin Li, Liang Lin, Sibei Yang†
  Accepted by International Conference on Computer Vision (ICCV) 2025
  We proposes Sim-DETR, which resolves DETR's query conflicts in temporal sentence grounding via self-attention adjustments and query-frame alignment, unlocking superior performance and faster convergence.
- **Rethinking Query-based Transformer for Continual Image Segmentation**
  Yuchen Zhu*, Cheng Shi*, Dingyou Wang, Jiajin Tang, Zhengxuan Wei, Yu Wu, Guanbin Li, Sibei Yang†
  Accepted by IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2025 [code]
  We proposes a query-based transformer framework for continual image segmentation that enhances plasticity and reduces catastrophic forgetting via lazy query pre-alignment, consistent selection loss, and virtual query replay.

Projects

- **Preserving Intra-Modal Consistency in Externally Guided Image Clustering** [code]
  We proposes a novel framework integrating external semantic guidance with internal feature consistency through Representation and Classification Consistency Learning to preserve intra-modal similarity and enhance image clustering performance.
- **Evaluation and Fine-Tuning of LLMs for Optimization Problem Transformation** [code]
  We evaluates the performance of large language models (LLMs) on transforming natural language linear programming problems into mathematical formulations, and demonstrates significant accuracy improvements through task-specific fine-tuning.
- **Deep Learning For 3D Kidney Vessel Segmentation** [code]
  We proposes a 2.5D deep learning approach using Swin Transformers and three-axis inference with edge pixel dropping to enhance 3D kidney vessel segmentation by effectively leveraging spatial context and multi-perspective integration.

Awards and Activities

- **ShanghaiTech Outstanding Student** — Dec. 2024
- **The Second Prize of the 15th Chinese Mathematics Competitions** — Dec. 2023
- **Teaching Assistant for Artificial Intelligence** — Feb. 2025 - Present

Main Courses

Artificial Intelligence (A+)	Machine Learning (A+)	Numerical Optimization (A+)
Convex Optimization (A+)	Information Theory (A+)	Computer Architecture (A+)
Signals and Systems (A+)	Calculus (A+)	Introduction to Programming (A)
Algorithms and Data Structures (A)	Linear Algebra (A)	Probability and Statistics (A)