Kunhang Li

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Education

Department of Computer Science, The University of Tokyo — Tokyo, Japan
Master in Computer Science — *10/2023 – 9/2025 (Expected)*

- Research Area: Natural Language Processing, Multimodality
- Supervisor: Yusuke Miyao
- Scholarship: UTokyo Fellowship (10/2023 – 9/2025)
- Courses: Applied Computer Graphics, Visual Media, Reinforcement Learning

College of Engineering, Peking University — Beijing, China
Bachelor in Robotics — *9/2019 – 7/2023*

- Research Area: Natural Language Processing, Multimodality
- Supervisor: Yansong Feng
- Courses: Introduction to Robotics, Machine Learning, Artificial Intelligence, Mathematical Foundations of the Information Age, Foundations of Natural Language Processing

Professional Experience

OMRON SINIC X Corporation — Tokyo, Japan
Research Intern — *12/2024 – 3/2025*

- Topic: AI-automated research idea generation

Publications

- Motion Generation from Fine-grained Textual Descriptions.
  Kunhang Li, Yansong Feng.
  The Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING), 2024.

Highlighted Projects

Probing LLMs' Knowledge for Human Motion Generation — 4/2024 – Present
The University of Tokyo | Master Project
Supervisor: Yusuke Miyao, Professor, Graduate School of Information Science and Technology

- Abstract: This project aims to explore the extent to which Large Language Models (LLMs) understand human motions. In particular, we seek to exploit LLMs' knowledge of human motions to generate 3D animations on a given human model in the computer graphics engine Unity, without any additional training data.

Motion Generation from Fine-grained Textual Descriptions — 3/2023 – 10/2023
Peking University | Bachelor Graduation Project
Supervisor: Yansong Feng, Associate Professor, Wangxuan Institute of Computer Technology

- Abstract: We build a large-scale language-motion dataset specializing in fine-grained textual descriptions, FineHumanML3D, by feeding GPT-3.5-turbo with step-by-step instructions with pseudo-code compulsory checks. Accordingly, we design a new text2motion model, FineMotionDiffuse, making full use of fine-grained textual information.
- Highlights: Multimodality; Fine-grained Text2motion; Diffusion Model.
- Accomplishments: Paper accepted by LREC-COLING 2024.

Other Projects

Digital Observatory 4/2024 – 4/2025

The University of Tokyo | Technical Staff

Supervisor: Yusuke Miyao, Professor, Graduate School of Information Science and Technology

- Abstract: The general background is to utilize LLMs and other language technologies (e.g., RAG) to predict the impact that global news might have on the global supply chain. As a technical assistant, I utilized LLMs to extract conflict-related information from massive amounts of news, and implemented a demo webpage to visualize such information.

Development of a Multilingual CCG Parser 10/2023 – 3/2024

The University of Tokyo | Technical Staff

Supervisor: Yusuke Miyao, Professor, Graduate School of Information Science and Technology

- Abstract: As the only contributor, I implemented a high-performance multilingual CCG parser for both CCGBank and multilingual CCG treebanks from the lab.
- Highlights: Multilingual CCG supertagging and A* supertag-factored parsing; Treebanks processing, training and evaluation.
- Accomplishments: The project was published with an easy-to-use interface.

Development of a CCG Parser 7/2022 – 9/2022

The University of Tokyo | Research Intern

Supervisor: Yusuke Miyao, Professor, Graduate School of Information Science and Technology

- Abstract: As the only contributor, I implemented a CCG parser comparable to SOTA ones from scratch, which paves the path to various kinds of phrase structure grammars (especially HPSG).
- Highlights: Hierarchical data class design; Neural CCG supertagging and parsing; Supertag-factored beam search and A* search.
- Accomplishments: The project was published on GitHub with an easy-to-use interface.

Semantic Analysis of Chinese Sports Instructions 7/2021 – 12/2022

Peking University | Research Assistant

Supervisor: Yansong Feng, Associate Professor, Wangxuan Institute of Computer Technology

- Abstract: This project aims to efficiently extract semantic information of bodily spatial states and changes from Chinese sports instructions.
- Highlights: Corpus construction of Chinese sports intructions; Annotation rule design (spatial semantic dependencies in predicate-argument structures); Annotation; Prediction system implementation (preprocessing, training, prediction and evaluation); Visualisation web service maintenance (built on brat).

Teaching Experience

- Teaching: TA for Foundations of Natural Language Processing (Peking University, April 2023)

Skills

- Programming and Technologies: Python (PyTorch), C, C++, C#, MATLAB, HTML, LaTeX, Markdown
- Natural Languages: Chinese (native), English (proficient, TOEFL 108), Japanese (intermediate), German (intermediate in reading)