Shisen Yue

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Education

- **Shanghai Jiao Tong University** — Shanghai, China
  Bachelor of Arts in Linguistics; GPA: 3.78 (88.5/100) — *Sept. 2020 – June 2024*
  Scholarship: Academic Excellence Award

- **University of California, Berkeley Extension** — Remote
  Course: C++ Programming (A) — *Sept. 2022 – Jan. 2023*

- **University of California, Los Angeles Extension** — Remote
  Course: Machine Learning (A+) — *July 2022 – Sept.2022*

Publications

[1] Yikang Liu, Ziyin Zhang.†, Wanyang Zhang†, **Shisen Yue**†, Xiaojing Zhao†, Xinyuan Cheng, Yiwen Zhang, Hai Hu (2023). ArguGPT: evaluating, understanding and identifying argumentative essays generated by GPT models. *arXiv preprint*

[2] Yixin Wang, **Shisen Yue**, Yanyi Zhong (2021). Understanding differences between human language processing and natural language processing by the synchronized model. *International Conference on Education, Language and Art (ICELA 2021)* (pp. 287-294). Atlantis Press.

Work Experience

- **Research Assistant, Ohio State University**
  Supervised by Prof. William Schuler — *April 2023 - Present*
  - **Regression Analysis on Eye-tracking Corpora**: Extracted eye-tracking data from existing eye-tracking corpora and performed regression to explore the correlation between the increased processing cost and the appearance of filler-gap construction. Found the significant correlation with data from the corpus dundee.
  - **Code Contribution**: Simplified the work chain in Makefile and contributed code to modelblocks-release.

Research Experience

- **Examining Identifiability of AIGC with SVM**
  Shanghai Jiao Tong University, Shanghai — *Feb. 2023 - July 2023*
  - **Linguistic Analysis**: Extracted linguistic features in human-written essays and AI-generated content, visualized them with violin plots and observed remarkable distinction in logic and lexical complexity.
  - **Classification Task**: Trained SVM classifiers with statistics on linguistic features to detect AI-generated essays and attained a best accuracy of 95.14% in the detector trained with function words' occurrences.
  - **Collaborative Research**: Co-authored an academic paper[1] on the project with teammates, elaborated content in terms of the research method, background knowledge and implications with ample references.

- **Perception of Event Boundaries Among Chinese Speaking Young Adult**
  Shanghai Jiao Tong University, Shanghai, grade A (Top 15%) — *Sept. 2022 - Feb. 2023*
  - **Event Comprehension**: Shot videos of continuous action, designed questionnaires and discovered the statistically significant difference in perceiving aspect markers between young adults, the elderly and children.
  - **Segmentation task**: Invited participants to segment actions displayed in the videos and found the consistence between the comprehension of aspect markers and the perception of sub-events. Explained the symmetrical results between the elderly and the children with theories of language acquisition and language attrition.

- **Evaluating Intelligent Chatting Applications from Linguistic Perspective**
  Shanghai Jiao Tong University, Shanghai — *Aug. 2021 - Dec. 2021*
  - **Experimental Design**: Formulated the research plan and designed questions that trigger the chatbot's response to evaluate its understanding of the given context in semantic, syntactic and pragmatic aspects.
  - **Linguistic Analysis**: Conducted extensive linguistic analysis on the generated content, examining aspects such as grammaticality, topic relevance and implicature inference with a synchronized model[2].

Course Projects

- **Comparative Analysis of Reinforcement Learning Algorithms**
  Shanghai Jiao Tong University, Shanghai, [Github] *Feb. 2023 - June 2023*
  - **Algorithm Implementation**: Implemented DQN, Dueling-DDQN, DDPG, and TD3 algorithms to examine and compare the traits of value-based and policy-based reinforcement learning algorithms.
  - **Algorithm Optimization**: Increased the agents' score by 10.26% by fine-tuning hyperparameters and applying optimization methods, such as epsilon decay, gradient clipping and weight initialization.
  - **Evaluation and Comparison**: Evaluated algorithm performance and effectiveness with Atari games and Mujoco simulated control tasks, and reviewed the previous literature on the two distinct approaches.

Extracurricular Activities

- **Head of Contact Center, School Students Union**
  Shanghai Jiao Tong University *Sept. 2021 - April 2022*
  - Responsible for fundraising for large events held by the student union, liaising with business leaders.
  - Coordinated with student unions of other colleges to organize large-scale inter-college activities.

Skills

- **Programming**: Python, C++, LaTeX, SPSS
- **Tools**: Nltk, Linux Shell, Git, OpenAI Gym, Pandas, Numpy, scikit-learn
- **Language Skills**: English (proficient), Spanish (DELE B1), Japanese (intermediate), Mandarin (native)
- **Standardized tests**: TOEFL 106 (L27 S23 R30 W26), GRE 327+4.0

Relevant Coursework

- **Linguistics**: *Syntax (97/100), Semantics (91/100), Language and Cognition(93/100), Language Data and Python Techniques (92/100), English Academic Thesis Writing (93/100), Phonetics and Phonology (90/100), Speech Pathology (A), Language Acquisition (A)*
- **Computer Science**: *Algorithm (97/100), Reinforcement Learning (95/100), Thinking and Approach of Programming (92/100), Data Structure (A), Probability and Statistics (97/100), Machine Learning (A), Intro to Machine Learning, C++ Programming (A)*