Chenlu Wang

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birthday: 2002-1-13 | Political appearance: the masses

Education

Beijing Jiaotong University undergraduate course School of Mechanical and Electronic Control Engineering 2020-09~2023-9
Major:Industrial Engineering (Intelligent Manufacturing) GPA: 2.88/4.00 rank: 14/24
Minor: Computer Science and Technology GPA: 3.25/4.00

Part of the main courses: object-oriented programming and C++(91), data structure (87), computer network principles (87), database system principles (86), introduction to artificial intelligence (96), compilation principles (94), deep learning (92), embedded system design (86), machine learning and Python programming (87), operations research 1 (92), operations research 2 (85)
Participated in the Blended Learning program at the **Massachusetts Institute of Technology**
Passed the Machine Learning, Modeling, and Simulation Principles course at the **Massachusetts Institute of Technology** in the summer of 2021, with a grade of A
https://xpro.mit.edu/certificate/4898183b-8bb6-475b-9a3d-487761744290/

Honorary Awards

2022 College Student Innovation and Entrepreneurship Training Program Beijing Campus Level Award

Research Experience

MultiRL: A reinforcement learning framework for unparallel literary text multi-style transfer (project leader)

2021-9~2021-12

・This project is an nlp project in the PBL of the Massachusetts Institute of Technology Blended Learning project. I was awarded a $3500 PBL scholarship for the 2021 Massachusetts Institute of Technology Blended Learning project under the leadership of Gary Becigneul, a former researcher in the MIT Natural Language Processing Group.
・A framework called MultiRL has been proposed, which extends the framework between two objectives to a dual learning framework between multiple objectives. Introduced a styleless vector representation of content as an intermediate step in the conversion between different styles. By using vectors to perform dual learning between multiple targets, each target receives multiple rewards in terms of style accuracy and content preservation, and is trained through reinforcement learning based on multiple mapping models. Implement transmission between multiple styles without parallel data.
・Most of the work has been completed, but due to hardware limitations, a good result has not yet been trained, so it is temporarily put on hold.

Research on Park Emergency Refuge Planning Based on Deep Reinforcement Learning (Project Leader)

2022-4~2023-4

・The project won the Beijing Campus Level Award for the 2022 College Student Innovation and Entrepreneurship Training Program Project
・Conduct research on the disaster prevention and evacuation functions of personnel intensive organizations, select campuses with high demand for emergency evacuation as the research object, and comprehensively consider the distribution of personnel in the park during work, dining, and sleeping periods under three disaster forms: earthquake, fire, and military strikes. Plan medical treatment plans, and establish the shortest evacuation time based on the Double DQN algorithm in deep reinforcement learning A park emergency shelter planning model with the goal of optimal medical service plan and minimum planning cost, and its effectiveness was verified at a university in Beijing.
・As the first author, the paper has been submitted to scientific and technological innovation

Research on Chinese Patent Text Segmentation Method Based on Graph Neural Network

2023-11~up to now

・Plan to use graph neural networks to develop a more accurate and fast Chinese patent text segmentation method, improve the accuracy of information extraction in Chinese patent texts, achieve automatic classification of patent documents, unify classification standards, improve classification accuracy, and reduce labor costs.

Research on Prototype Support Software for Commercial Wargame Inference

2023-11~up to now

・Plan to explore a prototype software that supports commercial chess deduction. At least four simulated business

environments are selected from eight important internal or external links, namely finance, market, finance, product, technology, production, supply chain, and policy environment. Each link is represented by simple quantitative indicators, and the probability of occurrence of the external environment is pre-set, and the impact relationship between each indicator is pre-set, And use Python programs to write data logic and display data frontend, achieving the goal of preliminary support for inference. The final commercial strategy can simulate complex business environments, including market changes, competitive pressures, policy impacts, and other factors.

Project Experience

IKEA Hand-on project

2022-6~2022-8

This project is a Hand-on project on supply chain data analysis in PBL in the Blended Learning project at MIT. Led by Arturo Torres Arpi Acero, a lecturer and researcher in supply chain analysis at MIT, it uses various traditional and machine learning, deep learning algorithms to predict datasets from various SKUs, Use various evaluation indicators to evaluate and compare the different results obtained by various algorithms for different datasets in different environments.

Epidemic prevention information reporting platform

2022-6~up to now

This project is a comprehensive and customizable high-fidelity information platform developed for schools and local township communities based on epidemic prevention needs. I am mainly responsible for system level synthesis and development of GUI interaction interfaces based on C #, as well as app development based on Android Studio and designed using Java.

Skills and others

・The national second level player of the fifth stage of Go, the champion of the 2020 Beijing Jiaotong University Inter School Cup Go, won the 7th and 8th China Japan South Korea Friendship Intercollegiate Team Tournament, and was relegated to the first group of the Beijing University Go League. He is also a member of the class life committee

・Skills: Having a solid foundation in mathematics (advanced mathematics, linear algebra, probability theory, and mathematical statistics) and computer fundamentals (data structures and algorithms, operating systems, principles of computer composition, computer networks).Familiar with programming languages and simulation software such as Python, Java, C C++, C #, as well as software applications such as CAD, FlexSim, Leapms, S7-PLCSIM V16. Proficient in GUI interface design, app development, and layout drawing.