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Haoxuan Xu

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Education

Shandong University 2020.9 — 2024.6 (expected)
Bachelor in Communication Engineering

- *Overall GPA: 83.46/100 3.3/4*

Research Interests

My research interests focus on practical problems in artifical intelligence and the potential applications of Deep Learning in various fields. I believe that advanced technologies like DL can have a positive impact on society.What I have researched includes computer vision, especially in object detection, and Natural Language Processing for social sciences.I am committed to contributing to meaningful causes that bring benefits to society through the development of practical DL and ML solutions.

Publications

1. **Classifying Crime Types using Judgment Documents from Social Media** pdf
   Haoxuan Xu, Zeyu He, Mengfan Shen,Songning Lai, Ziqiang Han,Yifan Peng
   *Accepted by International Seminar on Artificial Intelligence, Networking and Information Technology (**AINIT**), 2023*
2. **Cross-Domain Car Detection Model with Integrated Convolutional Block Attention Mechanism** pdf
   Haoxuan Xu, Songning Lai, Xianyang Li, Yang Yang
   *submitted at Image and Vision Computing (**JCR Q1 IF4.7**)*
3. **An Empirical Study on the Holiday Effect of China's Time-Honored Companies**
   Xianyang Li , Jiayi Xu ,**Haoxuan Xu**,Yunxuan Ma ,Yu Zhong ,Lei Wang
   *submitted at JOURNAL OF BEHAVIORAL AND EXPERIMENTAL ECONOMICS(**JCR Q3 IF1.5**)*
4. **Multimodal Sentiment Analysis: A Survey**
   Songning Lai, Xifeng Hu ,**Haoxuan Xu** , Zhaoxia Ren, Zhi Liu
   *submitted at DISPLAYS (**JCR Q2 IF 4.2**)*

Research Experiences

Domain Adaptive Nighttime Vehicle Detection **2022.6 — 2023.5**
Research Intern, Advisor: Prof. Yang Yang *Shandong University*

- Based on the improved CycleGAN and improved Faster R-CNN, this study focuses on domain adaptation (DA) for vehicle detection in multiple scenarios, specifically for detecting vehicles in dark conditions. Due to the labor-intensive annotation process, the existing daytime vehicle data is used as the source domain, and CycleGAN is employed to generate images of vehicles in the target domain (dark scenes). The improved object detector, Faster R-CNN, is then fine-tuned using the generated images after learning the features of daytime vehicles. This approach achieves satisfactory results in the detection of vehicles in dark scenes.

Cross-view Gait Recognition **2023.2 — 2023.6**
Research Intern, Advisor: Prof. Ziqiang Han *Shandong University*

- The project involves collaboration with Professor Yifan Peng from Cornell University to analyze crime facts using artificial intelligence models. The goal is to reduce errors in manual processing. My main responsibility is to use an improved NLP model to predict the charges associated with crime facts. Additionally, I crawled comments from social media platforms such as Weibo during the Turkish earthquake period. I conducted topic extraction and sentiment analysis on the crawled text to analyze the focus areas and emotional changes of people during the earthquake.**A journal article on sentiment analysis of the Turkey-Syria earthquake,for which I am the first author,is about to be submitted to Risk Analysis(JCR Q1 IF 4.302)**.

Selected Projects

LPRnet+YoloV5 License Plate Recognition System **2022.2 — 2022.5**

- Data preprocessing and data augmentation were applied to the CCPD (Chinese City Parking Dataset) public dataset to enhance the performance of the LPRnet license plate recognition network. Relevant models were trained, and the combination of LPRnet and the detection network Yolov5 was achieved by incorporating a license plate distortion correction module.

Internship at Qingsoft Group Company **2023.6**

- in the development of experiments for company's artificial intelligence and deep learning courses.
- Assisting in the research and development of multi-scenario applications for Ascend Atlas 200.
- Conducting multiple Linux system environment configurations.

Selected Awards

First Prize in Shandong Province for the National College Student Mathematical Modeling Competition (top 10%)
Second Prize in the 14th National College Student Mathematics Competition
Third-class Academic Scholarship at Shandong University

Skills

Python, C, Git, LaTeX, MarkDown, State
Pytorch, MATLAB, matplotlib, OpenCV, Tensorflow, Numpy