MaoWei Jiang

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ShenYang
https://github.com/Zero-coder/
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EDUCATION

University of Chinese Academy of Sciences Sep 2021 - Jun 2024

Electronic information Master Academy of Computer Science and Technology Beijing

- GPA: 3.40 / 4.00
- Related Courses: Pattern Recognization and Machine Learning, Dialectics of Nature, Research Project Management

Mianyang Teachers College Sep 2017 - Jun 2021

Electrical engineering and its automation Bachelor Academy of Electircal Engineering Mianyang

- GPA: 81.65 / 100
- Related Courses: Automatic Control Principle, Signal Processing and System Analysis

SUMMARY

- Fluent in English communication
- Strong innovation ability, rich project experience, entrepreneurial experience, and a passion for creating
- Skilled in coordinating communication and team collaboration, and willing to share knowledge
- Optimistic and humble personality, high resilience under pressure,responsible, team player, and efficiently collaborates to solve problems

  Problem-Solver,Quick Learner
- Highly sensitive to the latest technology and academic trends, willing to research and not afraid of failure.

RESEARCH EXPERIENCE

Field: Long-term time series forecasting

MW Jiang, PY Zeng, K Wang*, H Liu, WB Chen, HR Liu, "FECAM: Frequency Enhanced Channel Attention Mechanism for Time Series Forecasting", submitted to **Advanced Engineering Informatics. (CAS Q1-TOP , JCR Q1, IF = 8.8)** Published

MW Jiang, K Wang*, Y Sun, WB Chen, BJ Xia, RQ Li "MLGN: Multi-Scale Local-Global Feature Learning Network for Long-term Series", submitted to **Machine Learning for Science and Technology.(CAS Q2, JCR Q1, IF = 6.8)** Submitted after Major Revision

Field: Reinforcement Learning

ZX Wang, **MW Jiang(co-first author)**,S Li "Enhancing Data Efficiency in Reinforcement Learning: A Novel Imagination Mechanism Based on Mesh Information Propagation", submitting to **ICLR 2024 (top-tier conference in Machine Learning)**. Under Review

Field: Large Language Model

Automatic question-answering based on local knowledge base using LangChain and ChatGLM-6B series LLM
And so on.

PROJECT EXPERIENCE

Vehicle Monitoring System (Star: 180+ , Fork: 6 0 +) Jul 2021

Owner of this repository Link: https://gitee.com/jiang_maowei/car

- Introduction: This project achieves vehicle detection, counting, license plate detection and license plate recognition functions. Using the PyTorch deep learning framework, the open source YOLOv4 model is used to implement template detection, YOLOv5 is used to implement license plate detection, and LPRNet is used to implement license plate recognition.

PHM-GPT is all you need. May 2023

Owner of this repository Link: https://gitee.com/jiang_maowei

- Introduction: In the field of fault diagnosis, mainstream tasks include fault state detection, life prediction, expert knowledge base Q&A, and a series of tasks. Usually, these models independently complete their respective tasks, with no collaboration or connection between them. In order to unify these tasks, we use LLMs and LangChain to connect private resources, allowing a system to complete multiple tasks, such as classification and prediction, as well as local expert knowledge Q&A, such as diagnosing and providing repair advice and related information based on local knowledge after the diagnosis result appears. This provides a new solution for the field of fault diagnosis and life prediction.

Autoformer for Long-Term Series Forecasting (Star: 1.1K+, Fork: 285) Jun 2022

Member of this repository Link: https://github.com/thuml/Autoformer

- Introduction: Time series forecasting is a critical demand for real applications. Enlighted by the classic time series analysis and stochastic process theory, we propose the Autoformer as a general series forecasting model. Autoformer goes beyond the Transformer family and achieves the series-wise connection for the first time.In long-term forecasting, Autoformer achieves SOTA, with a 38% relative improvement on six benchmarks, covering five practical applications: energy, traffic, economics, weather and disease.

Smart Garbage Sorting System Based on TensorFlow Nov 2019

Member of this repository Link: https://gitee.com/jiang_maowei/garbage-raspi

- Raspberry Pi & tensorflow-based garbage sorting (open source): based on tensorflow / resnet50, a deep learning image classification network is built, and Huawei Cloud provides training data enhancement processing to fine-tune the model with limited training data and save network and weight files. The model is then converted into tflite format and deployed on Raspberry Pi with Python-Flask, providing a local API for Raspberry Pi's touch screen program to interact with users. An Electron-based Linux application package is also created, and the first version of the program is open sourced on Gitee and Bilibili as a feedback to the community. The correct rate of garbage classification is 93.6%, and the delay of single recognition is 0.8ms.

A framework for combining multi-object detection and multi-object tracking based on Yolov5+Deepsort Sep 2022

Owner of this repository Link: https://gitee.com/jiang_maowei/Detection-and-Tracking-Solving-Framework

We have developed a universal framework for combining multi-object detection and multi-object tracking based on Yolov5+Deepsort, which can be adapted to scenarios that require mobile object flow statistics. For example, in the livestock industry, intelligent counting is needed to track how many cows are out to pasture and how many have returned, as well as detect any missing animals. In shopping malls, different areas can be monitored to track customer traffic, which can be used to develop sales strategies or establish efficient evacuation routes in case of emergencies. In the manufacturing industry, it can be used to count processed parts and detect any missing or miscounted items. Intelligent traffic systems can also benefit from using video surveillance to track vehicle flow. By acquiring real-time and accurate traffic information, traffic resources can be allocated more reasonably, road efficiency can be improved, and traffic congestion can be prevented. Furthermore, it can be applied in the field of security to track the movement of suspects. All of these solutions can be easily and appropriately implemented on edge devices and can be integrated with cloud-based analysis and scheduling.

HONORS & AWARDS

2023 Hackathon @ BWM iFACTORY | Role: Project Leaderl Award: Certificate of Completion 2023.08

2022 Huawei Ascend AI Innovation Contest | Role: Project Leader | Award: Outstanding Solution 2022.11

Alibaba Cloud Tianchi - Small Sample Trademark Detection Challenge | Role: Project Leader | Global Rank: 239/2135 2022.03

Alibaba Cloud Tianchi - Asia-Pacific Ophthalmic Big Data Competition | Role: Project Leader | Global Rank: 142/10006 2021.11

Engineering Training Competition Intelligent Logistics Cart Groupl Role: Member | Award: The Second Prize 2020.03

Recipient of the 2018-2019 National Scholarship for Self-Improvement 2019.06

Embedded Design and Development Project National Competition | Individual Competition | Award: National Third Prize 2019.05

Embedded Design and Development Project State Competition | Individual Competition | Award: State-level First Prize 2019.03

Recipient of the 2018-2019 academic year Municipal Excellent Student award 2019.01

Bronze Award for Innovation and Entrepreneurship at the College Level 2021.02