

Yuming Huo

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Education Background

2021.09 – 2024.06

University of Bristol

Computer Science(BSc)

Project Experiences

Based on Body Capture Suit and Deep Learning to Improve Equine-Assisted Therapy

2024.01 – 2024.05

- The deep learning model was developed and trained based on PyTorch, and the data was collected using the dynamic capture suit. FNN and RNN models were used respectively to realize the automatic identification of the emotional state of patients receiving treatment.
- Normalization of raw time series data, including padding, truncation, and feature normalization, to ensure data consistency and quality.
- Visualize the training results of FNN and RNN, as well as the confusion matrix of the RNN model, and visually show how the model's predictions compare to the actual situation.

Automating Stack Robots (Collaboration with Toshiba Corporation)

2022.10 - 2023.06

- Responsible for all front-end development, some back-end Python and algorithmic development.
- Display robot status on the web using Panda3D and Three.js.
- Beautify the web and implement dark mode with Tailwind CSS.
- Bind the domain name and server to the project and deploy docker.

Identification of Plant Pests and Diseases

2023.06 – 2023.08

- Develop and train deep learning models using PyTorch, and train datasets based on YOLOv5.
- Data enhancement using zoom, flip, and colour transformation.
- Monitor and visualize the training process using tools such as Tensorboard and Wandb.

Dartboard identification

2023.10 - 2023.11

- A dartboard detector based on an AdaBoost algorithm is designed and implemented.
- Use Python and OpenCV for image processing and computer vision recognition tasks, including image preprocessing, edge detection, and shape recognition.
- Implement and optimize the Canny edge detection algorithm and Hough transformation for efficient detection and recognition of various shape features in images.

Personal Skills

- English skills: IELTS 6.5 (2020).
- GitHub homepage: <https://github.com/YumingHuo>
- National Badminton first-class player certificate.