Yang Ji

Email: Yang.Ji20@alumni.xjtlu.edu.cn
Portfolio: xprilion.com
Github: github.com/JikC

Education

- **Xi'an JiaoTong-Liverpool University** — Suzhou, China
  Master of Science in Multimedia Telecommunications (Distinction); GPA: 4.0 — *Sep. 2020 – Mar. 2022*
- **Nanjing Normal University** — Nanjing, China
  Bachelor of Science in Computer Science (normal); GPA: 3.5 — *Sep. 2016 – June. 2020*

Research Interests

- **AI-assisted screening**: Investigating computer-driven AI algorithms, such as screening for diseases with characteristic morphological changes. Research intelligent algorithms for making decisions and identifying anatomical structures in surgical scenarios to guide and simplify the work of physicians.
- **Image/Video processing**: Image enhancement, noise reduction and segmentation.
- **Medical/Clinical Image Analysis**: Image fusion, image segmentation and visualization .
- **Artificial Intelligence for Healthcare**: Data Integration / Standardization and the problem of Health Management.

Projects

Research Assistant in Suzhou Priority Laboratory of Pattern Recognition

- **Investigation of 3D Point Cloud Data Fusion with Low Overlap (Graduation Project with distinction, Supervisor: Prof. Kaizhu Huang)**: Complete the reproduction of the open source project framework and reproduce the function to achieve registration of pair of point cloud data, make an improvement in the accuracy of alignment of low overlap data.
- **Image Recognition**: Based on mask-RCNN, detect pedestrians by using pytorch. Understand the architecture and application of neural networks.
- **Classic framework of deep learning**: Implement the MLP, Parzen window method and KNN; do the classification on iris data set. Based on MNIST data set, build MLP and MQDF (modified quadratic discriminant function) models and do the classification, build a simple SVM model to predict (95.5%, 98.3%).
- **Classic framework of deep learning**: Implement the MLP, Parzen window method and KNN; do the classification on iris data set. Based on MNIST data set, build MLP and MQDF (modified quadratic discriminant function) models and do the classification, build a simple SVM model to predict (95.5%, 98.3%).

Experience

- **VINNO Technology (Suzhou)Co., Ltd.** — Suzhou, China
  Image Processing Engineer - Surgical Visualization — *Apr. 2022 - Present*
  - **ISP Algorithm**: Design and implement algorithms for image signal processing by using matlab. Collect, analyze and interpret the working principle, architecture and process flow of endoscopic image processing. Design, implement and fix-point image signal processing (ISP) module algorithm, including dead point correction, black level correction, Bayer image denoising, image demosaic, white balance, color correction and automatic exposure.
  - **Image Denoising and Sharpening**: Design and develop innovative video image denoising technology for RAW and RGB image denoising and sharpening. Collect research dataset, simulate the analog link and implement and verify the effect of the algorithm, as far as possible to minimize or eliminate the interference of noise on images.
  - **Image Defogging**: Research and summarize the technology and implementation methods of image dehazing. Design and evaluate endoscopic image defogging algorithm using atmospheric physical model and dark channel prior model.
  - **Patent**: An endoscopic image defogging algorithm based on dark channel model and HSV color model.
- **Deepmega Intelligent Technology Co., Ltd.** — Suzhou, China
  Artificial Intelligence Algorithm Engineer (Internship) — *Dec. 2021 - Feb. 2022*
  - **Model Training**: Training image classification models for classification of images based on 'MobileNetV2' with and without cancerous sections.
  - **Model Quantization**: Quantify medical image classification AI models to TPU and complete data training and prediction.
  - **Software development**: Development of the prediction module and the image annotation module of the company's software.

Honors and Scholarships

- Entry Scholarship(50 tuition fee remission) - September, 2020
- National Scholarship for Encouragement - November, 2019