Song Wang

AI Engineer with 3 years of experience focusing on Computer Vision, specifically, Object Detection, Image Segmentation, Fine-Grained Image Analysis, Machine Learning and their applications in Medical Image Analysis, Robotics and Meteorological data, etc. Also with working knowledge of Super-Resolution and traditional Image Processing techniques.

Education

2016/09 - 2018/02 **Columbia University** **(New York, NY)** **Master - MechEngineering**

courses: Applied Data Science, Linear Regression Analysis, Time Series Analysis, Evolutional Algorithm

2012/09 - 2016/06 **Dalian University of Technology (China)** **Bachelor - Fluid Mechanics**

Careers

2020/07 - 2021/10 **XX Labs** **AI R&D Engineer**

-Implemented a robotic pick-and-place algorithm that is capable of grasping and recognizing both known and novel objects in cluttered environments using **FCN-style Deep Learning segmentation** on RGB-D data.
-Designed and Implemented the **Perception module** of a cherry-tomato picking arm that guided it to detect and sense the depth of cherry tomatoes on stereo image data using **YOLOV4**.
-Realized the automatic compensation of robot arm torques using **Self Attention Mechanism** on tabular data.
-Built and optimized a Leaf Disease classifier using **Vision Transformer** .

2019/09 - 2021/05 **CellsVision Inc** **AI R&D Engineer**

-Lead and realized the end-to-end computer-aided diagnosis system of cervical cancer using **Object Detection** Image Segmentation techniques .
-Coordinated and implemented the computer-aided diagnosis system of thyroid cancer on whole-slide image of cells using Deep learning based Detection and Segmentation models.
-Boosted the diagnosis algorithms' performance consistently.

2019/04 - 2019/09 **MeteoForce Inc** **Machine Learning Engineer**

-Implemented the prediction pipeline to provide Meteorological data and prospect power generation of wind or solar farms for hours/days ahead using machine learning tools e.g. SVM/XGBoost/MLP.
-Conducted recurrent feature engineering based on physical insights, permutation importance or shap values.

Skills

Expert: Deep Learning, Computer Vision, Object Detection, Segmentation, Python, Pytorch, Chinese
Proficient:Machine Learning, Image Processing, OpenCV, Data Visualization, Data Analysis, English
Novice: vSLAM, Docker, R, Java, LaTex, Probabilistic Graph Model, C++, Super Resolution, Cantonese

Languages

Chinese(Native), English(Full Professional Proficiency), Germany, Cantonese(Limited Working Proficiency)