Fujian **Wu**

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Machine Learning Engineer

Bio. I am currently a software engineer at Pong Yuen Holdings Limited, Research recommendation systems, target detection and other deep learning algorithms.

Research interests. My research work involves a series of problems : **recommendation systems, object detection, object tracking, ensemble learning**. Currently, I am interested in various deep learning methods (CNN, GAN, Deep Bayesian Learning, etc.).

Education

Sep 2016 –Jun 2020 **Bachelor of Engineering**, *Nanfang College of Sun Yat-sen University* (NFSYSU), GuangZhou
Bachelor of Electrical Engineering and Automation
Advisor :Prof. ChouJun Zhan
Major:Further Mathematics,Complex analysis,Fundamentals of Electric Circuit
GPA : 3.64/5.0 | **Rank** : 5/272

Publications

- Zhan, C., **Wu, F.**, Huang, Z. et al. Analysis of collective action propagation with multiple recurrences. Neural Comput & Applic 32, 13491–13504 (2020). https://doi.org/10.1007/s00521-020-04756-3.
- Z. Wu, **F. Wu**, J. Chai, C. Zhan and Z. Yu, "Prediction of Daily Precipitation Based on Deep Learning and Broad Learning Techniques," 2019 IEEE 14th International Conference on Intelligent Systems and Knowledge Engineering (ISKE), 2019, pp. 513-519, doi : 10.1109/ISKE47853.2019.9170361.
- Wu, Shuangyan & Zheng, YuFan & Lai, Zhikang & **Wu, Fujian** & Zhan, Choujun. (2019). Movie box office prediction based on ensemble learning. 1-4. 10.1109/ISPCE-CN48734.2019.8958631.
- C. Zhan, **F. Wu**, Z. Wu and C. K. Tse, "Daily Rainfall Data Construction and Application to Weather Prediction," 2019 IEEE International Symposium on Circuits and Systems (ISCAS), 2019, pp. 1-5, doi : 10.1109/ISCAS.2019.8702124.

Skills

Programming Skills : **Python**,C, Matlab, LaTeX.
Machine Learning : *master in* **Ensenble Leaning,Deep Leaning**.
familiar with most predicted machine learning.
Computer Vision : *have a certain understanding of* image processing (segmentation, classification, etc.)

Projects & Experiences

\- / Oct 2021 **Recommendation system, PongYuen, Python**
- Recommend favorite movies based on movies the user has seen
- By analyzing the preferences of multiple users, it can recommend other movies that people who have seen that movie like to watch to users based on the information that users have seen a certain movie

Recommendation system | Machine Learning

Oct 2021 / Sept 2021 **Speech recognition, PongYuen, Python**
- Identify what the user is saying by the frequency and ripple of the voice

Speech recognition | Riva

Sept 2021 / May 2021 **Solar radiation prediction, PongYuen , Python**
- Analyze periodicity of solar radiation using Python and predict solar radiation using ensemble learning
- Calculate the relationship between solar radiation and power generation through the azimuth angle of the sun, the zenith angle, the position of the solar panel, and the physical properties

Deep learning | Image graying | Data to enhance

Jul 2020 – May 2020

Spodoptera frugiperda identification, PongYuen , Python

- Grayscale the image using python to reduce the amount of data that needs to be processed.
- The collected images are processed through geometric transformations such as translation, transposition, mirroring, rotation, scaling, etc., to correct the systematic errors of the image acquisition system and the random errors of the instrument position (imaging angle, perspective relationship, and even the lens itself).
- Classification predictions (cocoons, larvae, adults) of Spodoptera frugiperda using deep learning

Deep learning | Image graying | Data to enhance

May 2020 – Oct 2017

Time series forecasting, NFSYSU , Matlab/Python

- *Rain Forecast*Based on rain classification forecast implemented by Matlab.
- *Rain Forecast* Forecast based on rainfall classification implemented by python..
- Box Office Prediction with Ensemble Learning and Deep Learning.
- We consider actions that propagate in a social network with multiple communities and find the growth in the propagation breadth of collective action can be explained by a simple mathematical model with an analytical solution.

Ensemble learning | Deep learning | Broad learning | complex networks

Honors & Awards

Spring 2020 Outstanding graduates student of Nanfang College of Sun Yat-sen University.
Fall 2019 First-class scholarship for outstanding students in Zhejiang (<2%).
Fall 2018 First-class scholarship for outstanding students in Zhejiang (<2%).
Fall 2017 Second-class scholarship for outstanding students in Guangzhou (<7%).
2017-2020 Provincial Undergraduate Training Program for Innovation and Entrepreneurship (two times)
2017-2020 University-level Undergraduate Training Program for Innovation and Entrepreneurship

Interests

Sports : Table tennis, badminton.
Games : Mobile games, PC games,Board games.
Movies : Funny, Suspenseful, Historical, Scary.

(last update : 13 Feb. 2022)