Mingyong Ma

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EDUCATION BACKGROUND

2022.9-2023.12(expect)   **University of California, San Diego**   **Master of Science in Computer Science**

· **Related Courses**：Operating System(on-going), Computer Architecture(on-going)

2018.9-2022.6   **Wuhan University**   **Remote Sensing Science and Technology**

· **GPA:** 3.8/4.0（top 10%）

· **Honors**

Outstanding Student of Wuhan University (10%)   Second-class Scholarship of Wuhan University (15%)

· **Related Courses:** Machine Learning and Pattern Recognition (94), Data Structure and Algorithm (96)

SKILLS SETS

Programming Language：C++，Python, Java, HTML, CSS

Skills: Machine Learning, image processing, time series forecast

WORKING EXPERIENCE

2022.7-2022.08   **Amazon Software Engineer Intern.**   **Shenzhen**

· Implementing deep learning combined with the Unsharp algorithm, which outperforms tablet camera's algorithm on MTF-50.(MTF-50 is higher means the sharpness of the image is increased.)

· Controlling the imaging device by adb to generate an identical image with the image sharpening function turned on and off in the amazon lab. In this way is able to compare the performance of our algorithm vs the camera's algorithm on the same image.

· Able to control the sharpness of the model either manually or by the model itself.(user-friendly).

· Realized classical methods like Sobel, Canny operator, Unsharp algorithm and tested in amazon lab using Imatest software.

· Link on my doc: https://docs.google.com/document/d/1S46jZ-8dckQsfOBhptATirIpfbZMtj-Tk_El2qUFwyQ/edit#heading=h.ngzwh9d293if

2021.11-2022.02   **Lenovo Digital Transformation Department Data Analytic Intern**   **Beijing**

· Predicted the future sales of Lenovo's notebook products and tablets based on time series forecast according to Lenovo's previous sales data and some other data companies like IDC, GFK, etc.

· Implemented machine learning algorithms like Prophet and deep learning models like LSTM or GRU, which increased 1.2% accuracy of the model.

· Used Optuna to make hyperparameter adjustments to the project's existing code, which saved a large amount of time compared with the raditional grid search method.

PROJECT EXPERIENCE

2022.9-2022.12(expect)   **Operating System on nachos**   **UCSD CSE 120**

· Implementing internal structures of the operating system: Alarm() function to call timer interrupt; Join() function to sleep the parent while waiting for the child thread to finish; Using Condition Variables and locks to provide atomicity;

· Solving concurrency problems like exchanging values using Condition Variables and Locks on multi-thread programs.

· Implementing the file system calls create, open, read, write, close, unlink, join, exit and exec.

· manage the allocation of pages of physical memory so that different processes do not overlap in their memory usage.

RESEARCH EXPERIENCES

2021.6-2021.9   **Artificial Intelligence for Driving Scientific Experiments in CMU**   **online**

· Applied active learning to the classification task of malaria cells

· Used only 26% of the data to achieve comparable accuracy close to the 100% of data usage in other literature by applying uncertainty sampling.

· Explored who has a higher improvement effect on model generalization by comparing random sampling with uncertainty sampling and Logistic Regression with SVM.

· Paper accepted by the 2021 IEEE 3rd International Conference on Frontiers Technology of Information and Computer.

PUBLICATION

1. **Mingyong Ma,** Active Machine Learning-driven Experience on Malaria Cell Classification, **accepted** by 2021 *IEEE 3rd International Conference on Frontiers Technology of Information and Computer(ICFTIC 2021)*
doi: 10.1109/ICFTIC54370.2021.9647411