Ling-Chih Yao

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Education

University of Hawaii at Manoa, Honolulu, HI 2014 - PRESENT
Ph.D. program in Computer Science

National Taiwan University, Taipei, Taiwan 2006 - 2013
B.S. in Computer Science and M.S. Networking and Multimedia

Skills

Programming Languages & Softwares: Python, Git, C/Java, Matlab, Linux, Latex, Slurm, Docker
Libraries & Frameworks: Numpy, Pandas, Matplotlib, Scikit-learn, Keras, TensorFlow, Pyspark, MPI for Python, PyTorch

Publications

The 29th edition of the Australasian Database Conference, 2018
L.-C. Yao and L. Lim. "**Parallelizing String Similarity Join Algorithms**,"

The 29th Workshop on Combinatorial Mathematics and Computation Theory, 2012
L.-C. Yao and K.-Y. Chen. "**Computing the Longest Common Subsequence of Multiple RLE Strings**,"

Experience

University of Hawaii at Manoa, Honolulu, HI 2015 - PRESENT
Teaching Assistance
Prepare materials and help students review the topics in Descrete Math, Algorithms, and Databases

University of Hawaii at Manoa, Honolulu, HI 2014 - 2015
Research Assistance
Design parallel algorithms of k-merge sort on k sorted array with total n itmes.
Use the pipline to complete the algorithm in $O(\log\log n + \log k)$ parallel time and $O(\log k)$ work.

Trend Micro, Taipei, Taiwan Dec. 2013 - Jul. 2014
Quality Assurance Engineering
Test cases on the security software to ensure the functionality.

Data Science Projects

Wells Fargo: Enviroment Solution (GitHub)
Use machine learning skills to find the new balance between carbons reduction and quality of life.
Explore the individuals' actions and recommend the actions which can reduce the carbon and keep the quality of life.
Analyze the data and using k-Nearest Neighbor model from skleans to generate the recommendations.

Digit Classification (GitHub)
Using different approach in deep learning to calssify the hand-write digits.
Implement multi-Layer neural network by scratch with Numpy, and polular tools like Pytorch and Karas.
Using convolutionary neraul network (CNN), popular skills in image classification, to make prediction.

Tree Cover Prediction (GitHub)
Using scikit-learn to help classify the forest cover in Roosevelt National Forest of northern Colorado.
Data explore with ExtraTreesClassifier to evaluate the feature importance.
Visualize the data with histogram and scatter plots.
Compare the performace of predictions from decision tree classifier, kNN clasifier, neural network classifier.