

YEN-CHENG CHANG

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RESEARCH INTERESTS

Signal & Image Processing, Computer Vision, Machine Learning, Optimization Algorithm, Artificial Intelligence

EDUCATION

National Taiwan University M.S. in Electrical Engineering and Computer Science Sep, 2018 - Sep, 2020

- Taiwan Evolutionary Intelligence Laboratory, Advisor: Prof. Tian-Li Yu
- Coursework: Artificial Intelligence, Advanced Digital Signal Processing, Genetic Algorithms, Mathematical Principles of Machine Learning, Convex Optimization Algorithm
- Master's thesis: Verifiability Enhanced Active Learning Using Multi-armed Bandit.
Proposed a pool-based active learning technique that queries instances using the concept of verifiability, which is defined as the proportion of instances that are correctly classified by all classifiers in the version space.

National Taipei University B.S. in Computer Science and Information Engineering Sep, 2014 - Sep, 2018

- Coursework: Algorithm, Linear Algebra, Probability and Statistics, Computer Vision, Data Mining

EXPERIENCE

Machine Learning Researcher Sep, 2020 - Present
Research & Develop team, Deputy Chief Engineer, E.SUN Financial Holding Company
Taipei, Taiwan

Artificial Intelligence Researcher, Intern Jul, 2019 - Sep, 2020
Intelligence Document Layout team, AI researcher, Cinnamon AI Taiwan Inc.
Taipei, Taiwan

Teacher Assistant Jul, 2019 - Sep, 2020
Introduction to Computer Science & Artificial Intelligence, National Taiwan University
Taipei, Taiwan

PUBLICATION

SMILE: Sequence-to-Sequence Domain Adaption with Minimizing Latent Entropy for Text Image Recognition. Yen-Cheng Chang, Yi-Chang Chen, Yu-Chuan Chang, and Yi-Ren Yeh, ICIP, 2022.

Due to the characteristic of sequential labeling in OCR, we proposed a UDA method with minimizing latent entropy on sequence-to-sequence attention-based models with class-balanced self-paced learning.

g2pW: A Conditional Weighted Softmax BERT for Polyphone Disambiguation in Mandarin. Yi-Chang Chen, Yu-Chuan Chang, Yen-Cheng Chang, and Yi-Ren Yeh, INTERSPEECH, 2022.

The proposed method adapts learnable softmax-weights to condition the outputs of BERT with the polyphonic character of interest and its POS tagging to solve the problem of polyphone ambiguity.

Traditional Chinese Text Recognition Dataset: Synthetic Dataset and Labeled Data. Yi-Chang Chen, Yu-Chuan Chang, Yen-Cheng Chang, and Yi-Ren Yeh, ICPR Workshop, 2022

This paper presents a framework for a Traditional Chinese synthetic data engine. We generated over 20 million synthetic data and collected over 7,000 manually labeled data TC-STR 7k-word as the benchmark.

WORKS & HONORS

- T-Brain AI Competition: AICUP2021 Traditional Chinese scene text recognition, 2nd Place, 2021
- Promoted from Technical Manager Assistant to Deputy Chief Engineer (within a year), E.SUN FHC, 2020
- Best Master's Thesis award, National Taiwan University, Department of EECS, 2020
- One of the Developers in Cinnamon.ai AI Document Reader, Cinnamon AI, 2019
- Zhen lin Science Education Center Advanced High School Mathematics Class, Teaching Assistant, 2019
- Some [notes](#) from my recent work on document and image processing, Present