Min-Sheng Wu

Student

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Min-Sheng

min-sheng-wu

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About me

Min-Sheng Wu is currently in his 2nd year of a master's degree in Computer Science at National Taiwan University. His research area is Computer Vision, especially in medical image analysis, image segmentation, and object detection. He has a passion for research, coding and grasping new knowledge.

Skills

- Computer Vision
- Deep Learning
- Machine Learning
- Image Segmentation
- Object Detection
- Medical Image Analysis
- C/C++
- Python
- PyTorch
- TensorFlow/Keras
- Linux

(*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

Education

2018- **Master's Degree** — National Taiwan University
Major: Computer Science
Advisor: Prof. Winston Hsu

2014-2018 **Bachelor's Degree** — National Cheng Kong University
Major: Biomedical Engineering
Grade: GPA 4.14/4.3
Honor: the Dean's list award for three times

Publications

2019 **Batch-wise Dice Loss: Rethinking the Data Imbalance for Medical Image Segmentation** — Med-NeurIPS 2019

Awards

2018 **Third place in the 2018 IEEE Signal Processing Society Video and Image Processing (VIP) Cup.**
I help our team develop an accurate deep neural model to win the CT lung tumor segmentation competition.

Experience

2018 **aetherAI** — Taipei
I utilize deep learning to facilitate the histology image analysis.

Research

1. **Few-shot Instance Segmentation for Pathological Images**
   - Aim to largely alleviate the burden of the manual annotation for instance segmentation.
   - Propose a novel and effective few-shot learning method.
2. **Unsupervised Learning of Folding-free B-spline Medical Image Registration**
   - Accelerate the deformable image registration for cardiac cine MRI via unsupervised learning.
   - Propose 2D and 3D B-spline neural networks to address self-folding problem and improve the registration accuracy.

Projects

1. **CT Lung Tumor Segmentation**
   - Win the **third place** in the 2018 IEEE Signal Processing Society VIP Cup and present the work in 2018 ICIP.
   - Improve the baseline model via modifying the architecture and loss function to surpass the state-of-the-art performance.
2. **Facial Makeup Transfer**
   - Aim to transfer the makeup style from a makeup face image to another non-makeup one while preserve the face identity.
   - Leverage the GAN-based approach and facial attributes attention to achieve the goal.
3. **KKStream Deep Learning Workshop**
   - Predict a most likely time slot that user will watch TV to properly push notification according to the historical data.
   - Utilize Natural Language Processing (NLP) and deep learning and win the **first place** on the Kaggle leaderboard.