Yumin Zheng

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Education Background

Beijing University of Posts and Telecommunications   2016 – now

Internet of Things, Undergraduate Student

GPA 3.4/4, rank 31/180

Personal Rewards：

- 2018 Second Prize Scholarship of BUPT
- 2018 Merit Student of BUPT
- 2017 Third Prize Scholarship of BUPT

Academic Publication：

- Zhu, Q. and Zheng, Y. and Jiang, Y.and Yang, J.(2019) Efficient Multi-class Semantic Segmentation Of High Resolution Aerial Imagery With Dilated Linknet.,IEEE Geoscience and Remote Sensing Society.

Experiences

A deep learning based remote sensing system Undergraduate Innovative Project   2018.04 – 2018.12

Remote sensing imagery semantic segmentation based on deep learning on Mobile end

- Develop PyTorch based D-Linknet to a multi-task model
- Data cleaning and model building
- The accuracy tops other existing methods on the ISPRS Potsdam dataset
- Implement the algorithm on Nvidia TX2 embedded platform, and establish featuring images upload, download and prediction from a remote terminal
- Result paper is accepted by an IEEE conference IGARSS 2019
- Third prize of 2018 China "AI+" Innovative Competition

A deep learning algorithms to cluster cells using PPI data from different labs

Cooperate with Haohan Wang   2018.09 – 2018.11

Remove the confounding factors among different labs to reduce the error of clustering.

- Process and combine protein-protein interaction data from different labs
- Implement variational Auto-Encoder from Keras to PyTorch
- Propose a novel deep learning model： combine VAE with Domain-Adversarial Neural Network
- The model yields relatively higher accuracy while stabilizing the process of clustering

A deep learning method to identify Poly(A) signal among different species

Cooperate with Haohan Wang   2018.12 – now

Remove the species specific factors to improve generality among different species

- Propose a model combined CNN with MLP and deconfounding the features with HEX projection
- Build the proposed model Poly(A)-DAGemNet on TensorFlow
- Design experiments to evaluate the performance in some scenarios
- Poly(A)-DAGemNet outperforms state-of-art methods in identifying Poly(A) signal among different species

SKILLS

- Programming Languages: Python == C > Java > C++
- Deep Learning Platform: TensorFlow, PyTorch, Keras
- Deep Learning Methods: Supervised Learning, Unsupervised Learning and Transfer Learning
- Machine Learning Methods: SVM and K-Means
- Classic Deep Learning Models: CNN, LSTM, VAE, ANN and etc..