Chaolong **Ying**

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Education

Xidian University *Aug. 2019 - Jun. 2022*

Master in Computer Science and Technology

- Average grade: 87.35/100

Xidian University *Aug. 2015 - Jun. 2019*

Bachelor in Electronic Information Engineering (Outstanding class)

- GPA: 3.7/4.0

Research Experience

Guangzhou Institute of Technology, Xidian University *Sept. 2020 - Jun. 2021*

Student researcher, advised by Prof. Jing Liu

Topic: **A spatial-temporal prediction framework for temporal link prediction in dynamic networks**

(Preparing)

- Extracted multi-level spatial features of dynamic networks with capsule graph neural network.
- Adopted high order fuzzy cognitive maps to model and predict the temporal features.
- Decoded the aggregated features into graphs with MLP.

IPIU Lab, Xidian University *Mar. 2020 - Sept. 2020*

Student researcher, advised by Prof. Jing Liu

Topic: **A multiobjective evolutionary approach for solving large-scale network reconstruction problems via logistic principal component analysis**

(Under revision in IEEE Transactions on Cybernetics)

- Used binary-coded individuals to represent the networks directly and proposed two alternative representations.
- Generated offspring solutions in a network structure subspace learned by logistic principal component analysis.
- Performed preference-based local search operator to focus on finding k-sparse solutions.

IPIU Lab, Xidian University *Sept. 2019 - Mar. 2020*

Student researcher, advised by Prof. Jing Liu

Topic: **An evolutionary sparse multitasking algorithm for network reconstruction problems**

- Adopted fast iterative shrinkage thresholding algorithm to approximate the distribution of genes in optimal solutions.
- Used sparse genetic operators to generate offspring solutions.
- Trained RBM to learn low-dimensional subspaces, and explicitly transfer knowledge between the subspaces of each task.

Publication

Learning large-scale fuzzy cognitive maps using an evolutionary many-task algorithm *Applied Soft Computing*

Chao Wang, Jing Liu, Kai Wu, **Chaolong Ying** *2021*

Highlighted Projects

Traffic Prediction based on temporal graph convolutional network *Feb. 2021 - Apr. 2021*

We modeled the roads in an area as a graph and their traffic information as the attribute features. Combining graph convolutional networks and LSTM, our model precisely predicted the traffic flow of some roads near our campus.

Molecular activity prediction based on graph convolutional network *Oct. 2020 - Nov. 2020*

We transformed the molecular structures into graphs, cut or padded the graphs into uniform size, and used graph convolutional networks to predict their labels, reaching competitive results to state-of-the-art methods.

Honors & Awards

Nov. 2020 The second class Scholarship of Xidian University
Nov. 2018 The first class Scholarship of Xidian University (**Top 5%**)
May. 2018 The Second Prize, National English Competition for College Students (NECCS)
Nov. 2017 The second class Scholarship of Xidian University
Nov. 2017 The Third Prize, The Chinese Mathematics Competitions (CMC) in Shaanxi Province
Nov. 2016 The third class Scholarship of Xidian University

Skills

English CET 6: 604
Programming Familiar with Python, Matlab, C++, Pytorch, and Pytorch Geometric