

# RENQI JIA

✉ jiarenqi2015@foxmail.com · ☎ (+86) 15927695970

## 🎓 EDUCATION

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<b>University of Chinese Academy of Sciences</b> , beijing, China	Sept. 2019 – Jun. 2022
Master student in Institute of Information Engineering, GPA:3.74, rank:5%	
<b>Wuhan University</b> , wuhan, China	Sept. 2015 – Jun. 2019
Bachalor of Computer Science, GPA:3.92, rank: 1%	

## ♡ HONORS AND AWARDS

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Zeng Xianzi Scholarship, Wuhuan University	Sept. 2015 – Jun. 2016
National Scholarship, Wuhuan University	Sept. 2016 – Jun. 2017
National Encouragement Scholarship, Wuhuan University	Sept. 2017 – Jun. 2018
Outstanding Undergraduate Thesis Award, Wuhuan University	Sept. 2018 – Jun. 2019

## ⚙ SKILLS

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- English: CET-4:605, CET-6:561
- Programming Languages: Python, C++, Java
- Courses: Machine Learning, Natural Language Processing, Information Retrieval

## 👤 RESEARCH EXPERIENCE

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### Hypergraph Convolutional Network for Group Recommendation

Published in the International Conference on Data Mining, 2021

- The model learns group's preference from member-level and group-level. In the member-level preference network, we devise a member-level hypergraph convolutional network to learn group members' personal preferences. In the group-level preference network, the group's general preference is captured by a group-level graph convolutional network based on group similarity.
- The model is evaluated on Mafengwo and CAMRa2011 datasets. The results on Hit and NDCG outperform the baseline models, such as NCF, Popularity, and AGR.

### A Self-Supervised Learning Framework for Sequential Recommendation

Published in the International Joint Conference on Neural Networks, 2021

- The model utilizes contrastive learning to extract the relation between the contextual data and the representation of sequence or user. The self-supervised optimization enhances the representation quality of users and items.
- The model is evaluated on Amazon, Goodreads, and MovieLens datasets. The results on Recall and NDCG outperform the baseline models, such as BPR, GRU4Rec, SASRec, and HGN.

### Knowledge Graph Embedding by Translating on Multi Hyperplanes

Bachelor Thesis

- Based on TransE, the model uses a set of mutually orthogonal basis vectors to define a generalized hyperplane, a two-layer nonlinear fully connected neural network to define the scoring function, and the log-likelihood loss function to optimize the model.
- The triple classification and the link prediction experiments are conducted on the WordNet and Freebase datasets. The result on Mean Rank and Hits outperforms the baseline models, such as TransE, TransH, and TransD.

## PUBLICATIONS

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- Jia, Zhou, Bai, Pan, et al. “A Self-Supervised Learning Framework for Sequential Recommendation.” the International Joint Conference on Neural Networks (2021).
- Jia, Zhou, Dong, Pan, et al. “Hypergraph Convolutional Network for Group Recommendation.” the International Conference on Data Mining (2021).

## PROJECT EXPERIENCE

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### **Recurrent AI Inc.**

Jun. 2021 – Jul. 2021

*Project Member, Summer Intern*

- Explore few-shot learning based on pre-trained language models with prompt technology. The pre-training phase includes unsupervised span corruption tasks and various supervised tasks with prompt technology, concatenating task description text in the input, and generating predictive text at the output.
- To enhance the unsupervised migration ability in the pre-training stage, we train an extra Bert model as sample selector to select unsupervised data similar to supervised data and increase the corresponding loss weights; we add the CMD loss which measures the distance between supervised and unsupervised data.

### **ByteDance Inc.**

Jun. 2020 – Sept. 2020

*Project Member, Summer Intern*

- Use Xgboost to integrate the picture features, user comments features, and user account features to identify risks of live content. Use PySpark and Hive for feature preprocessing and feature retrieving.
- Based on the pre-trained model BERT, classify whether the sentence contains the leader’s name or not. Use data augmentation to enhance the model performance, up to 84%.

### **The Contest of News Sentiment Analysis**

Oct. 2019 – Dec. 2019

*Project Leader, Rank: 39/2745, organized by CCF BDCI*

- Topic: Given the long news text, distinguish its sentimental polarity.
- Models: Use BERT and RoBERTa pre-trained models as baseline models. Use two BERT models to expand the input; use GRU at the top of the model to fully extract features; use the representation of hidden layers at [CLS] position to predict.
- Tricks: data augmentation, data preprocessing, data clean, multi-model fusion