

# TINGLIN HUANG

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<https://huangtinglin.github.io>  $\diamond$  <https://github.com/huangtinglin>

## EDUCATION

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**Zhejiang University**

*Sep. 2019 - Present*

MEng in Software Engineering

Advisor: Prof. [Xinyu Wang](#)

**Shenzhen University**

*Sep. 2015 - Jun. 2019*

BEng in Software Engineering with honor, GPA: 3.96/4.5 (Top 5%)

## PUBLICATIONS

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[1] **Tinglin Huang**, Yinlin He, Dexin Dai, Wenting Wang, Joshua Zhexue Huang. Neural Network-Based Deep Encoding for Mixed-Attribute Data Classification. PAKDD 2019.

[2] Yingying Zhu, Min Tong, **Tinglin Huang**, Zhengkun Wen, Qi Tian. Learning Affective Features Based on VIP for Video Affective Content Analysis. PCM 2018.

## MANUSCRIPTS IN PREPARATION

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[1] Xiang Wang\*, **Tinglin Huang\***, An Zhang, Xiangnan He, Xu Tong, Tat-Seng Chua. Interpretable Representation Learning on Knowledge Graph-aware Recommendation. Submitting to WWW 2021. (co first-author)

## RESEARCH INTERESTS

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Machine Learning, Reinforcement Learning, Recommendation System, Graph Learning

## RESEARCH EXPERIENCE

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**NExT++ Center, National University of Singapore**

*May. 2020 - Present*

*Research Intern*

- Advised by Prof. [Tat-Seng Chua](#) and Dr. [Xiang Wang](#), I explored the potential of applying knowledge graph to the recommendation system.
- During this internship, I proposed a relational path-aware convolution network, which provides an efficient way to aggregate the multi-hop neighbors in different relational space and explicitly enriches the representations of users.
- Compared to other state-of-the-art knowledge-aware recommendation methods, the proposed method significantly exhibits substantial improvements (about 10.0% relative improvement on average) on three benchmark datasets. The paper is expected to submit to WWW 2021.

**DiDi Inc.**

*Nov. 2019 - Mar. 2020*

*Machine Learning Intern*

- During this internship, I explored the potential of applying reinforcement learning methods to recommendation system ranking task. Specifically, the system recommends the appropriate funder for each user who applies for a loan.
- Developed a model based on duelingDQN and doubleDQN, and modified the training process of model and completed the reward shaping.
- The model is currently launched online. In the first week, the loan per user is greatly improved (10.15%).

- Advised by Prof. [Joshua Zhexue Huang](#), I mastered how to apply Machine Learning to big data analysis, and assist in some research projects.
- Explored the data preprocessing technologies like auto-encoder for handling discrete value attributes, and proposed an auto-encoder with a new loss function which is obtained by adding the original loss function and weighted entropy.
- The experimental results prove the effectiveness of the algorithm (accuracy is improved by 2%-3%), and the paper has been included in a workshop of the conference PAKDD 2019.

## SELECTED AWARDS AND HONORS

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Excellent graduates of Shenzhen University	<i>Jun. 2019</i>
Chinese Undergraduate Mathematics Contest in Modeling (national second prize)	<i>Jul. 2018</i>
Chinese Undergraduate Computer Design Contest (national third prize)	<i>Sep. 2017</i>
Four years of Merit Scholarship	<i>2016-2019</i>

## TEACHING EXPERIENCE

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Teaching Assistant in C++ Program Design	<i>Fall 2016, Fall 2017</i>
Teaching Assistant in Introduction to Computer Science	<i>Spring 2017, Spring 2018</i>