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**EDUCATION**

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- **University of Science and Technology of China(USTC)** Hefei, China  
**B.S** Department of Automation(expected in Jul 2021) *Sep. 2017 – Present*
  - **GPA:** 3.86 / 4.0 in WES standard, rank 7/100
  - **Selected Courses:** Pattern Recognition(97/100), Electromagnetism A(95/100)  
Complex function(95/100), Probability and Statistics(95/100), Signal and System(95/100)  
Machine Learning(95/100).

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**SELECTED RESEARCH EXPERIENCES**

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- **EdgeGCN: Not Every Edge is Trustworthy** UIUC  
Advisor: Prof.Kevin CC. Chang, forward data lab *Jun 2020- Jan 2021*
  - Rethinking the Graph Neural Networks from the aspect of semi-supervised learning(SSL) methods
  - Developed code based on PyTorch<sup>1</sup>
  - The project is being suspended due to my internship between Jan 2021 - Jun 2021.
- **KD for Rec: Knowledge Distillation for Recommendation** USTC  
Advisor: Prof.Xiangnan He, Lab for Data Science *Jul 2020-Jan 2021*
  - Make big embedding models for recommendation system become small and good enough.
  - Developed codebase for multi baselines,based on PyTorch<sup>2</sup>.
  - The project is being suspended due to my internship between Jan 2021 - Jun 2021.
- **Simplifying and Powering Graph Convolution Network for Recommendation** USTC  
Research Assistant, Advisor: Prof.Xiangnan He, Lab for Data Science *Jun 2019-Oct 2019*
  - Aim to simplify the design of GCN to make it more concise and appropriate for recommendation.
  - Developing PyTorch version of the model<sup>3</sup>
  - The paper is being accepted by *SIGIR2020*<sup>4</sup>.

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**SELECTED PROJECTS**

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- **TorchTrace** *Github repo*  
Autograd library
  - Implemented most of the operations we need to build a neural network, with autograd supported
  - The PyTorch-like API's fashion, we can easily migrate a PyTorch code into a torchtrace code
  - Implemented a reinforcement learning algorithm DQN<sup>5</sup> in TorchTrace
- **PRank** *Github repo*  
Binary Relationship extractor for text mining
  - A library for text mining, especially designed for binary relationship.
  - Strong scalability, Pure Python

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<sup>1</sup><https://github.com/gusye1234/EdgeNN><sup>2</sup>[https://github.com/gusye1234/KD\\_on\\_Ranking](https://github.com/gusye1234/KD_on_Ranking)<sup>3</sup><https://github.com/gusye1234/pytorch-light-gcn><sup>4</sup><http://staff.ustc.edu.cn/~hexn/papers/sigir20-LightGCN.pdf><sup>5</sup><https://github.com/gusye1234/2020-ML-project>

## WORK EXPERIENCE

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- **MengXi Investment Company** Shanghai, China  
Online Intern *Jun 2018-Sep 2018*
  - Developed grammar analysis engine of the system in python alone to let users can use a simpler grammar to build their own quantitative standards to pick a stock.
  - Got the chance to have full internship of the company in ShangHai(9 in 150).
- **Muti-agent system Lab USTC** Hefei, China  
Research Assistant *Aug 2018-Dec 2019*
  - Main developer of the automated system for packing box in delivery industry, consisted of online packing algorithms, multi-joints arms planning, 6D pose and scale estimation, image processing.
  - Integrated machine learning algorithms into packing system to estimate boxes' 6D pose and scale estimation for grasping.

## LEADERSHIP AND AWARDS

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- **Mathematical Contest In Modeling** USA  
Meritorious Winner *Mar. 2020*
  - Play the role of coding and mathematical modeling
- **Robotics and AI Summer School of Imperial College London** London, US  
Group Leader *Jul 2019-Aug 2019*
  - Coordinated with group members from different cultures to complete a demo<sup>6</sup> in 3 weeks.

## SKILLS

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- **Languages:** Mandarine(Native), English(Toefl 103, GRE 328+3.5)
- **Programming Languages:** Python, Java, go, Julia, C/C++, MATLAB, L<sup>A</sup>T<sub>E</sub>X
- **Library:** Pytorch, Tensorflow, OpenCV, Bullet, Sklearn, Numpy ...
- **Platform:** ROS, Arduino

## LINK

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- **Github**
- **Personal Website**

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<sup>6</sup><https://github.com/gusye1234/LachFore>