

# Jingtun Zhang

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**Objective position:**Machine Learning Engineer, Software Engineer (R & D)

Github: OrdinaryCrazy [[Link](#)]

## EDUCATION

- **Texas A&M University** College Station, TX, USA  
Master of Computer Science (MCS), Supervisor: Prof. Shuiwang Ji [[Link](#)]  
Aug. 2020 – Dec. 2022
- **University of Science and Technology of China** Hefei, Anhui, China  
Bachelor of Computer Science and Technology, **GPA: 3.67/4.30**  
Aug. 2016 – July 2020

## EXPERIENCE

- **Tiktok.Inc** Bellevue, WA, USA  
Software Engineer (R & D) Feb. 2023 – Now
  - ByteGNN project contributor: algorithms research, implementation and testing, dataset building and evaluation, customer service and supporting.
  - SAGN(Scalable and Adaptive Graph Neural Networks)-based e-commercial risky ads feature generator's initial developer: requirement analysis, algorithms design, implementation, online co-testing, documenting, upgrade and optimization. (TOP1 Recall +0.52%, TOP10 Recall +4.68%)
  - ComfyUI operator-level GPU sharing plugin model contributor: coding, testing and documentation, enabled users leveraging Tiktok's cloud GPU resources to do batch diffusion images generation (throughput +14% ~ +28% compared with opensource version).
  - TCE(Toutiao Compute Engine, Tiktok's kubernetes-based cloud service) HPA custom resource supporting feature's initial developer, enabled complicated services to do autoscaling based on custom defined metrics, stable version released achieved +7% SMA gain in online services.
  - Tiktok search service for local service contributor: video and article e-commercial value feature engineering.
- **DIVE Lab @ Texas A&M University** College Station, TX, USA  
Research Assistant, Supervisor: Prof. Shuiwang Ji July 2020 - Dec. 2021
  - Assisted in building up and finetuning a robust self-supervised learning graph neural networks framework on OGB dataset and OC20 Challenge for biomedical drug molecules' filtering and property prediction.
- **SenseTime @ Beijing** Haidian, Beijing, China  
Research Assistant, Supervisor: Dr. Wenxiu Sun Feb. 2020 - June 2021
  - Built an animation frame interpolation dataset from scratch and framework for preprocessing and benchmarking a wide range of frame interpolation algorithms on the animation video.
- **Univeristy of California, Santa Barbara** Santa Barbara, CA, USA  
Summer Research Intern, Supervisor: Prof. Yufei Ding July 2019 - Sep. 2019
  - Utilized motion-vector information to accelerate video object detection as part of a MxNet-architecture compiler framework project for deep video stream processing like MSRA-DFF.
  - Attempted to build a more complicated MV-Net to improve the quality of motion vector used at feature map level, promising to not just scale the motion vector by 1x1 convolutional layer, getting **MAP@5 = 0.6225**.

## PROJECTS

- **(Challenge) Open Catalyst Challenge (Rank #3)** [\[Link\]](#) Aug. 2021 - Oct. 2021
  - Built machine learning models to simulate the relaxation process of a molecular system.
  - Programed dataset preprocessing and profiling to differentiate the distribution of adsorbate and catalyst.
  - Splited dataset by the distribution of the system to train models on different subsplits to ensemble.
- **(Open Source Library) Dive Into Graphs (Stars 900+)** [\[Link\]](#) Oct. 2019 - July. 2021
  - Implemented a unified library for graph deep learning algorithms, data interface and baseline.
  - Coded for data loading, preprocessing and evaluation strategies of graph self-supervised learning part.
  - Achieved better or comparable results and computation complexity than most authors' code.
- **(Website) Kayak for Mask** [\[Link\]](#) Oct. 2021 - Dec. 2021
  - Built a Kayak-like website for kid's mask searching and filtering.
  - Based on Django framework and able to update information by spidering online sheets and store pages.
  - Deployed on Heroku [\[Link\]](#) by docker images to serve as public resource for fighting Covid-19.

## PUBLICATIONS

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- Xie, Y., Xu, Z., **Zhang, J.**, Wang, Z. and Ji, S., 2021. Self-supervised learning of graph neural networks: A unified review. arXiv preprint arXiv:2102.10757. [[Link](#)]
- Liu, M., Luo, Y., Wang, L., Xie, Y., Yuan, H., Gui, S., Yu, H., Xu, Z., **Zhang, J.**, Liu, Y. and Yan, K., 2021. DIG: A Turnkey Library for Diving into Graph Deep Learning Research. (**JMLR2021**) [[Link](#)]

## SELECTED AWARDS

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- **National Scholarship** Hefei, Anhui, China  
For Top 5 percent Student Sep. 2018

## PROGRAMMING SKILLS

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- **Languages:** Python, C/C++, Golang **Technologies:** Pytorch, Tensorflow/Keras, Kubernetes