Hongyu Jia

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EDUCATION

Tsinghua University   Beijing, CHN
Master of Engineering - Software Engineering - **GPA: 3.96 / 4.0**   Sept 2019 - June 2022
Honors: Glodon First-Class Scholarship 2020 (Top 10%). KDD Cup AutoML Track 4th place 2019.

Dalian University of Technology   Dalian, CHN
Bachelor of Engineering - Software Engineering (Japanese Intensive) - **GPA: 4.18 / 5.0**   Sept 2015 - June 2019
Bachelor of Arts – Japanese (Dual Degree)
Honors: National Scholarship 2015 (Top 2%). School Outstanding Student 2016 (Top 1%).

PUBLICATION

Jia H, Jiang Y, Zhong C, et al. **TTDeep: Time-Triggered Scheduling for Real-Time Ethernet via Deep Reinforcement Learning**[C]//2021 IEEE Global Communications Conference (GLOBECOM). IEEE, 2021.
- Proposed a scheduling framework; used the graph neural network and policy network to schedule network routing.
- Disassociated network links' time resources and created an algorithm to solve the search problem in the enormous action space; increased the real-time network's scheduling ability by 126.4%.

Sun J, **Jia H**, et al. **Speeding up very fast decision tree with low computational cost**[C]//Proceedings of the Twenty-Ninth International Conference on International Joint Conferences on Artificial Intelligence. 2021.
- Devised an incremental measure algorithm based on candidate attributes to judge the timing of the decision tree's split in real time.
- Proposed incremental formulas about information entropy and Gini index; reduced the split delay by 80%.

WORK EXPERIENCE

Deep Learning Technology Platform, Baidu   Beijing, CHN
Senior Research Engineer (Deep Learning Framework)   July 2022 - Now
- Performed as a core member of PaddlePaddle's (Github stars 19k+) high reusability operator library team.
- Designed and optimized kernel selection process in the dynamic graph; improved Paddle's performance to be comparable with or better than Meta's PyTorch in certain scenarios.
- Supported and extended the custom operator mechanism to help external developers plug in new backends or operators more freely.

Display Advertisement Group, Alibaba   Beijing, CHN
Intern (Causal Inference)   July 2021 – Sept 2021
- Designed a serial substitution algorithm to quantify the fluctuation range of core sales indicators.
- Built a probabilistic causality diagram and implemented a Bayesian network to backtrack the cause of fluctuation.

System Group, Microsoft Research Asian   Beijing, CHN
Intern (Information Retrieval)   Mar 2021 - June 2021
- Optimized the space vector recall model and adopted the asymmetric structure and PolyEncoder algorithm; increased the fidelity by 2.8 points.
- Designed subscribe-publish parallel training architecture; accelerated inverted index recall model by 32.5 times.

WXG Pattern Recognition Center, Tencent   Remote, CHN
Intern (Recommendation System)   Apr 2020 - Aug 2020
- Established relations between Wechat Reading's users and books and adopted the GraphSAGE algorithm to optimize the DeepFM-based ranking model; increased the AUC index by 3%.
- Proposed and implemented book conversion rate features to enrich the user profile.