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1st year master student in *computer science @ UW–Madison* seeking an intern of SWE, with:

- interest in HPC (high performance computing) & system programming
- 1 year *full-time* experience as a software engineer @ ByteDance
- 2 years research experience in AI with Honors Research Program
- 4 years contest experience (prior to college) in classical algorithms and data structure

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Education

University of Wisconsin – Madison   Sep. 2023 – May. 2025 (expected)
*In pursuit of **M.S. Computer Science***   *Madison, WI, USA*

- Interest: HPC, Computer Systems & Architectures, Software Engineering
- Ongoing courses: HPC, Advanced Computer Architecture, SmartNIC System

Shanghai Jiao Tong University   Sep. 2017 – Aug. 2021
University of Michigan - Shanghai Jiao Tong University Joint Institute   *Shanghai, China*
B. Eng. Electrical and Computer Engineering, minor in Data Science

- Enrollment of Honors Research Program
- Related Courses: *Honors Mathematics* (A+), *Big Data System* (A+), *Computer Organization* (project: implemented **a pipelined CPU**), *Operating System* (project: built a bash shell, implemented a **multi-thread** database, modified a Unix-like **kernel**)
- Good English Fluency: TOEFL scored 109/120 with speaking 27/30

Professional Experience (Full Time)

ByteDance   July 2021 – July 2022
Software Engineer   *Shanghai, China*

- **Spot Bonus Award**: received for outstanding outcome in building a robust core strategy service, a Bayesian and complex strategy-based recommender system to adaptively provide students with exercises most suitable to their current abilities
- Refactored codes of 11 strategies for a **large-scale** microsystem with millions of lines of codes to enhance maintainability for a strategy team of 10 backend engineers
- Created a **distributed** service with eventual consistency and multiple sources within limited 2 weeks
- Invented a JSON-like data interchange format and its parser to transfer specific graph relational data
- Improved the quality of service monitoring by customizing alarm scripts to every service and tuning parameters, reducing half of the false alarm rate for a team of near 50 backend & QA members

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Computer Related Skills

Programming Languages

- proficient in Golang (roughly **60k lines of code** while working at ByteDance)
- familiar with C/C++ and Python
- coding experience in more than **10 languages** (ranging from hardware-level to application-level)

Familiar Fields

- operating system (Linux as daily-used system for 3 years)
- AI (hands-on experience for 2 years)
- database (industry experience in MySQL, InfluxDB, Redis for one year)
- compiler, distributed system & computer architecture
- full-stack development (e.g. 1 year industry experience, personal website with Next.js)

Awards

GMTK Game Jam   July 2022
*Ranked **11 out of 6000+** games in public ranking*   *Worldwide, Online*

- Led the technical team by actively communicating with the art & design members, and assigned works to other two coding members to ensure the accomplishment of the game within 48 hours; implemented C# codes of the user interface

VEX Robotics China Final   June – Nov. 2018
Fourth Place, Amazing Prize, Top 2 in autonomous track   *Shanghai, China*

- Designed autonomous driving algorithms based on the PID algorithm; tuned the robot's parameters and tested its robustness to ensure its stability in completing a 45-second-long self-driving race through a two-day intense match

The Interdisciplinary Contest in Modeling   Feb. 2018
Honorable Mention, Team Leader   *Shanghai, China*

National Olympiad in Informatics (series competitions)   Nov. 2015 - Nov. 2016
First Prize, won Twice (Province Level); Bronze Medal (National Winter Camp)   *China*

- A highly competitive coding contest in **Data Structure & Algorithm**

Selected Research Experiences

On Sample Efficiency Improvement for Deep Reinforcement Learning   Oct. – Dec. 2020
Honors Research Program   advisor: Prof. Paul Weng   *SJTU, Shanghai, China*

- Designed an innovative algorithm by expanding artificial trajectories in Invariant Transform Experience Replay (data augmentation for DRL), achieving successful training result with fewer samples: trained in the contracted 120 epochs

Movie Recommender System for Groups using Hybrid Metrics   Jan. – Feb. 2020
*Team Leader, **Best Project** in the Winter School*   advisor: Prof. Arnav Jhala   *NCSU, NC, USA*

- Gained 42% decrease in error by applying Neural Collaborative Filtering with hybrid metrics to CAMRa2011 (rating dataset)

Model Based Deep Reinforcement Learning for Autonomous Driving   June 2019 – Sep. 2020
Team Leader   advisor: Prof. Paul Weng   *SJTU, Shanghai, China*

- Explored feasibility of a self-designed model-based deep reinforcement learning algorithm; used it to successfully train an agent completely offline to move safely on the obstacle-free road, over a 140GB pre-collected dataset