

Zhenwei Hu

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Education

University of Illinois Urbana-Champaign - Master of Computer Science (MCS)	GPA: 4.0/4.0	Aug. 2022 - Dec. 2023
The University of Hong Kong - Bachelor of Engineering in Computer Science	GPA: 3.84/4.3	Sep. 2018 - June. 2022

Skills

Programming Languages: C++, Python, Kotlin, Java, MySQL, JavaScript, HTML/CSS

Tools & Libraries: Git, Linux, CMake, Android Jetpack Compose, GDB, Numpy, Matplotlib

Experiences

Grammarly - Software Engineer Intern	May 2023 - Aug 2023
<ul style="list-style-type: none">Developed a Scratchpad for the new Grammarly android app using Kotlin flows, Jetpack compose and Room database.Used Gnar events and SQL queries to monitor and analyze user engagement with the Scratchpad, tracking daily usage by 200+ users.	
Goldman Sachs - Summer Analyst	Jun. 2021 - Aug. 2021
<ul style="list-style-type: none">Built a program performance monitoring system and visualization dashboard using Python Dash with Plotly.Contributed pull requests to an internal monitoring system on the company Gitlab by optimizing program runtime.	
Tencent Music Entertainment - Backend Developer Intern	Aug. 2020 - Jan. 2021
<ul style="list-style-type: none">Reconstructed a Python backend song recommendation system, reducing manual deployment time from 2 hours to 10 min.Maintained the reconstructed system by adding new features such as generating system reports, recording failure reports in MySQL databases and automating data processing using Crontab jobs.Resolved memory issues of a Python song recommendation program, reducing memory usage from 20GB to less than 2GB.	
Derivatives China - C++ Developer Intern	Mar. 2020 - Aug. 2020
<ul style="list-style-type: none">Implemented a real-time multi-threaded market data receiving and forwarding system using C++ TCP and UDP socket with multi-threaded safe queue, heartbeat and reconnect mechanism.Broadcasted real-time market data to internal hosts using ZMQ Publish-Subscribe pattern and EPGM protocol, achieving broadcast bandwidth >35MB/s.Compressed market data using C++ ZSTD library and reduced broadcast bandwidth requirements by 60%.Packed the data forwarding system written in C++ in a Python API with Pybind11 for other teams' use.	
The University of Hong Kong - Research Assistant - Prof. Reynold C.K. Cheng	May. 2022 - Sep. 2022
<ul style="list-style-type: none">Conducted experiments on HINCare, a Heterogeneous Information Network (HIN)-based recommendation systems for elderly care, to explore the accuracy and performance of recommendation models, such as TransE, TransH and TransE-KG, achieving Hit Ratio (HR) > 90% and Discounted cumulative gain (NDCG) > 0.4.Adapted Reinforcement learning-based Meta-path Selection (RMS) algorithm to investigate performance of meta-path-based algorithms.Performed massive statistical analysis on SKH and CFSC elderly dataset with 1500+ users and 25000+ relations.	

Projects

Hugo Blog - A personal blog recording competitive programming algorithms and contest editorials

- Built a Hugo blog with theme Even, customized configuration, page layout and styles with **CSS, Javascript and Hugo shortcuts**.
- Implemented **CF-Problems** with **HTML, CSS and JavaScript**, which is a tool for showing **CodeForces** problem difficulties and tracking training progress. Use **GitHub Actions** and Codeforces API to automatically update CodeForces problems every day.
- Wrote **110+** blog posts (in Chinese), recording **ACM-ICPC contest editorials** and **competitive programming algorithm tutorials**.
- Received **53000+** visits (with **27000+ unique** visitors).

Other Activities

Awards:	The 2022-2023 ICPC NAC (North America Championship) Honorable Mention	2023
	The 2022-2023 ICPC USA Mid-central Regional Contest Champion (Gold Medal), rank: 1/100	2023
	The 2019 ICPC Asia Shanghai Regional Contest Bronze prize	2019
Extracurricular:	Shenzhen Junior Chess Tournament Champion	2010, 2011, 2014