Weijun Huang

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EDUCATION

Technical University of Denmark	Lyngby, Denmark
Master of Human-centered Artificial Intelligence	*Sep. 2021 – Jul. 2023 (Expected)*
École Polytechnique Fédérale de Lausanne (EPFL)	Lausanne, Switzerland
Student exchange program	*Sep. 2022 – Feb. 2023*
Xi'an University of Architecture and Technology	Xi'an, China
Bachelor of Urban and Rural Planning (top 10%)	*Sep. 2015 - Jul. 2020*

WORK EXPERIENCE

LFX Mentorship at Vitess   Remote
Open Source Developer   *Sep. 2022 - Present*
- Improved the compatbility of Vitess' ***evaluation engine*** against MySQL by adding support for more built-in SQL functions ⓞ

Alibaba Summer of Code at PolarDB   Remote
Open Source Developer   *Jul. 2022 - Aug. 2022*
- Implemented ***distributed acceleration of COPY statement*** for the PolarDB for PostgreSQL, which allowed multiple machines to read in parallel for the read operation, and multiple processes to write concurrently on a single read/write node.
- Learned a lot about distributed system, working remotely, and databases ⓞ

Google Summer of Code at MariaDB   Remote
Open Source Developer   *May. 2022 - Sep. 2022*
- Researched the existing implementation of regression functions on different databases, like PostgreSQL
- Implemented ***regression functions*** based on Youngs-Cramer algorithm for MariaDB server
- Improved the JSON output to better suit development and debugging purposes
- Learned a lot about C++ programming and Mysql unit testing framework ⓞ

RESEARCH EXPERIENCE

Data-Intensive Applications and Systems laboratory   Lausanne, Switzerland
Project Student   *Sep. 2022 – Preent*
- Implemented the **adaptive radix tree index** and **Cuckoo Trie** index in Proteus — a database engine designed for the heterogeneous environments
- Analyzed performance gains and bottlenecks compared with ART index, Cuckoo Trie index, and hash-indexes

PERSONAL PROJECT

RookieDB (Java)
- Designed a ***bare-bones database implementation*** which supports executing simple transactions in series
- Constructed ***B+ tree indices***, efficient join algorithms, query optimization, multigranularity locking to allow concurrent execution of transactions, and database recovery

Modifications to the xv6 Operating System (C)
- Built a modified version of MIT's xv6 Operating System, which adds several new ***scheduling algorithms***, ***copy-on-write***, and ***lazy allocation page***, symbolic links, mmap, along with a couple of system calls ⓞ

Bear Map (Java)
- Worked on the backend of a ***web mapping application*** in the town of Berkeley
- Achieved the complete rastering and completed ***A* algorithm*** to find the ***shortest path*** ⓞ

SKILLS

Programming: C, C++, C#, Java, Rust, Python, Go, Shell, Javascript, SQL, LaTeX, HTML, CSS
Software & Tool: Linux, Git, GDB, CUDA, MPI, OpenMP, Adobe Creative Cloud (Photoshop, Illustrator)
Language: Fluent in Chinese and English