Kuangyu Chen | Curriculum Vitae

kuangyuchen@ruc.edu.cn • +86 13370166024

https://github.com/chenkychris

RESEARCH INTERESTS

- *Interests:* Quantum Computing, Database Systems, Computer Architecture, Distributed Systems, Hardware Acceleration.
- *Current Research:* Focuses on optimizing the cardinality estimation process of query optimizers in database systems with neural subgraph isomorphism counting technology.

EDUCATION BACKGROUND

Renmin University of China (RUC), Beijing, China   09/2020-06/2024

- Bachelor of Engineering in Computer Science
- GPA: **3.68**/4.00 (**88**/100)

PUBLICATION

- Chenyang Zhang, Feng Zhang, **Kuangyu Chen**, Mingjun Chen, Bingsheng He, Xiaoyong Du, EdgeNN: Efficient Neural Network Inference for CPU-GPU Integrated Edge Devices, The 39th IEEE International Conference on Data Engineering (*ICDE 2023*), Anaheim, CA, USA (April 03–07, 2023).

RESEARCH EXPERIENCE

EdgeNN: Efficient Neural Network Inference for CPU-GPU Integrated Edge Devices   07/2021-10/2022

Research Assistant, *Key Laboratory of Data Engineering and Knowledge Engineering, RUC*

Supervisors: Prof. Feng Zhang, and Prof. Xiaoyong Du

- Proposed EdgeNN, the first neural network inference solution on CPU-GPU integrated edge devices.
- Utilized CUDA unified memory to conduct zero-copy optimization, and implemented CPUGPU hybrid execution and fine-grained adaptive inference tuning approach to accelerate inference.
- Evaluated EdgeNN on four platforms varying in architecture, confirming its considerable advantages in performance speedup and energy efficiency.

COURSE PROJECTS

RUC Base: Database Project (Grade: 94/100)   04/2023-Present

- Implemented ARIES database log recovery algorithm on "RUC-base" code framework, which will serve as the problems of the "2023 Computer System Development Capability Competition-Database System Kernel Designing Competition" (competition not started).

TEACHING ASSISTANT

Teaching Assistant, Introductory Programming II (Honors Course, Grade: 90/100)   03/2022-07/2022

Supervisor: Prof. Yahui Sun (*30+ Undergraduates*)

- Led weekly computer lab exercises and designed the course project;
- Responsible for Q&A on the assigned programming exercises.

Kuangyu Chen | Curriculum Vitae

kuangyuchen@ruc.edu.cn • +86 13370166024

https://github.com/chenkychris

ACADEMIC CONTESTS

Meritorious Winner, 2021 Mathematical Contest in Modeling (MCM)   03/2021

- Implemented image processing algorithm based on OpenCV, which featurized Hornet pictures for classification by species.

Provincial First Prize, Contemporary Undergraduate Mathematical Contest in Modeling (CUMCM)   09/2021

- Implemented particle swarm optimization to optimize factors to make reflectors as close as possible to the ideal paraboloid.

MEMBERSHIP

Volunteer, 2021 "Fellow Students Are Coming" Programme   06/2021

- Accompanied student recruitment committee and did logistics for admission consulting for fresh high school graduates.

Member of Department of Technology, School Association for Computers   09/2020-12/2020

- Repaired laptops for schoolmates and popularized basics of computers weekly;

Member, School Association for Mathematical Modeling   09/2020-12/2020

- Participated in advertising a lecture on the 2021 Mathematical Contest in Modeling.
- Organized a seminar on cryptography.

Member, School of Information Badminton Team   09/2020-Present

- Attended the school badminton competition representing the School of Information.
- Participated in 2-hour weekly training.

PROFESSIONAL SKILLS

- *Specialties:* Database Systems, Parallel Computing, CPU-GPU Integrated Architectures, Distributed Systems.
- *Programming Language:* C++, Go, Python, CUDA, Verilog, SQL.
- *Platform & Software Operation System*: Vscode, Anaconda, Linux