Bocheng Cui

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SKILLS

Programming languages: C, C++, Golang, Python, SQL, R, and Java.

Platforms: Linux, Windows, and macOS.

Others: Algorithm, Data Structure, Distributed Programming, Systems, Networking, etc.

PROJECTS

Extracting Amplicon Reads from a Whole Shotgun Metagenomic Dataset (Python, SQL, Shell. Teamwork) [Code]

- In this project, we designed and implemented a tool for DNA sequencing, and amplicon reads extracting.
- My responsibilities:
 - Designing, building, and maintaining the SQLite database.
 - Creating interfaces and scripts to link different parts of the application.
 - Designing algorithms for sorting and sequencing.

Sharded K/V storage system (Go, Python, Shell. This is a solo job)

[Code]

- In this project, I designed and implemented a fault-tolerant K/V storage system that can serve a big chunk of data with low latency.
 - Simplified and implemented a Raft protocol.
 - Designed and implemented a fault-tolerant Sharded K/V storage system on the modified Raft.

Distributed MapReduce (Go, Python, Shell. This is a solo job)

[Code]

Implemented a Distributed MapReduce model.

WORK EXPERIENCE

University of New Hampshire College of Engineering and Physical Sciences Durham, New Hampshire Teaching Assistant. September 2021- Present

- TA for 1 ungraduated-level and 1 graduate-level CS course.
 - Answering students questions, Grading and partly joining the preparation of student assignments.

University of New Hampshire College of Engineering and Physical Sciences Programming Assistance Center Consultant.

Durham, New Hampshire September 2021- Present

• Programming Consultant for C/C++, Java, Python, and SQL.

University of New Hampshire College of Engineering and Physical Sciences

Durham, New Hampshire Computer Science Grader February 2021- June 2021

Grading 2 computer science courses.

University of New Hampshire Dining Service

Durham, New Hampshire

Food Serve Assistant - Student

August 2020 - December 2020

Worked in various positions based on University of New Hampshire dining hall needs.

Intel China, Ltd. Qingdao, China

Team leader June 2015 - May 2017

Lead a team to participate in the Excellent Student Program. Learned how to be a team leader.

EDUCATION

University of New Hampshire

Durham, New Hampshire Since Aug 2018

Ph.D. in Computer Science GPA: 3.47/4.00

Oingdao University of Science & Technology

Qingdao, China

B.S. in Polymer Material and Engineering

September 2014 - June 2018