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Bocheng Cui

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SKILLS

Programming Languages	Golang, C, Python, C++, Java
Tools	Docker, Git, Bash, Mini-net, AWS, Google Cloud, LaTeX, Markdown, HTML, Conda, R, SQL, Node.js, PHP
Others	Distributed Systems, Algorithm, Data Structure, Networks, etc

EXPERIENCE

Teaching Assistant <i>University of New Hampshire</i>	Aug 2021 — Present <i>Durham, NH</i>
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- Teaching assistant for 1 grad-level course and 1 under-grad level course.
- Creating bash and python scripts to grade student homeworks.
- Generating solutions and sample outputs for coding assignments.
- Using Latex to create/modify assignment descriptions.

Programming Assistant <i>University of New Hampshire</i>	Aug 2021 — Present <i>Durham, NH</i>
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- Help students with coding in modern languages like C/ C++ Java, Python.
- Teaching data structures, algorithms, and computer system knowledges.

CS Grader <i>University of New Hampshire</i>	Feb 2021 — May 2021 <i>Durham, NH</i>
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- Grading for 3 CS courses(HTML, Computer System, and Java develop)

Team leader <i>Intel China Ltd</i>	Jun 2015 — May 2017 <i>Qingdao, Shandong</i>
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- Leading a college team to participate in the Excellent Student Program and communicating with outer organizations.

PROJECTS

Fault tolerance sharded K/V storage system with map reduce	2021
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- 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 sharding algorithm and shard controller. By default, it would split data evenly on all edges. User can also decide the location for each shard of data as their need.
- Designed and implemented data migrating algorithm. In my design, during the data migration, servers can still safely work and reply to clients.
- Introduced google map reduce to this system.

Milestone	2021
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- A Android game developed in Java.
- Users from all over the world can play against each other, or be teammates.

Extracting Amplicon Reads from a Whole Shotgun Metagenomic Dataset	2020
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- Designed and implemented a tool for DNA sequencing, and amplicon reads extracting.
- Designing, building, and maintaining the SQLite database.
- Creating interfaces and scripts to link different parts of the application.
- Designing algorithms for sorting and sequencing.

Peer-to-peer chatting App	2018
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- Designed and implemented an application that allows users to do peer-to-peer chatting directly.
- Provides users with a low latency, high transferring speed chatting experience.
- Protect user's privacy by never collecting user data.

EDUCATION

Ph.D. in Computer Science , <i>University of New Hampshire</i>	Since 2018
Bachelor of Material Science , <i>Qingdao University of Science & Technology</i>	2014 - 2018

ACTIVITIES AND HONORS

UNH College of Engineering and Physical Sciences (CEPS) Dean Scholarship	2018 - 2022
QUST Students Union's VP in charge of New Media Center	2015 - 2017