

Ryan (Cheng-Hao) Yang

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EDUCATION

Northeastern University

M.S. of Computer Science

Boston, Massachusetts

Expected Aug. 2023

State University of New York at Stony Brook, Stony Brook University (SBU)

M.S. of Computer Science

Stony Brook, New York

Sept. 2019 - Jun. 2021

University of Illinois, Urbana-Champaign, UIUC

Exchange Student in Computer Science Department

Urbana, Illinois

Sept. 2018 - Dec. 2018

National Chiao Tung University, NCTU

B.S. of Computer Science

Hsinchu, Taiwan

Sept. 2015 - Jun. 2019

TECHNICAL SKILLS

- **Languages:** C++ (advanced), C, Bash, Go, SQL, Python, Java, JavaScript
- **Skills:** AWS Lambda, Docker, Boost, Poco, OneTBB, Ansible, PyTorch, Mbed OS, Unreal Engine, Cocos2d-x, Qt6, SDL2
- **Human Languages:** English, Mandarin, Japanese

TECHNICAL EXPERIENCE

System Research Group

Research Assistant

Northeastern University, Boston

Sept. 2021 - Present

- Designed and implemented Serverless-powered Network Filesystem in C++ to provide a high-performance and cost-efficient Distributed Filesystem [1]
- Created Deep Learning models for Fund Prediction from daily stock market prices and long-term sector trends

NetSys (Networked Systems) Laboratory

Research Student

Stony Brook University, New York

Sept. 2019 - Jun. 2021

- Designed and Implemented Telescope to optimize video streaming on the decentralized IPFS network. [2]
- Created NAT traversal tools using custom protocols with multiple platform support
- Implemented Raft and Key-Value store Raft in MIT lab 6.824

Yeh Laboratory, Cold Spring Harbor Laboratory

Project Leader

Cold Spring Harbor, New York

Sept. 2019 - Present

- Built custom RFDiffusion for computational de novo protein design and structures analysis
- Implemented Rosetta platform for computational modeling and analysis of protein structures [3]
- Built bioinformatics pipelines for protein and antibody NGS analysis

Coordinated Science Laboratory, UIUC

Independent Study Student

Urbana, Illinois

Sept. 2018 - Dec. 2018

- Verified Hybrid Automata vehicle model using C2E2 (Advisor: Professor Sayan Mitra)

PROFESSIONAL EXPERIENCE

CDNJS

Software Engineer Volunteer

Hsinchu, Taiwan

Sept. 2016 - Sept. 2018

- Improved CDNJS homepage and Maintained CDNJS repository. Ranked #17/1293 by contribution commits

Northeastern University

Teaching Assistant

Boston, MA

Jan. 2023 - Aug. 2023

- 2023, CS3650, Computer System, 250 students
- 2023, CS3520, Programming in C++, 70 students

PUBLICATIONS AND AWARDS

- 1 **Cheng Hao Ryan Yang** et al., “SLFS: a File System Design with Serverless Paradigms”, (under review (EuroSys '24))
 - Won **Third place** of presentation in Northeastern System Day at Khoury College of Computer Sciences
- 2 **Cheng Hao Ryan Yang** et al., “Is IPFS Ready for Decentralized Video Streaming?”. in Proceedings of the 32nd International World Wide Web Conference (WWW'23), 2023
- 3 Farrell BM, Gerth F, **Yang CR**, Yeh JT. “A synthetic KLHL20 ligand to validate *CUL3*^{KLHL20} as a potent E3 ligase for targeted protein degradation.” Genes and Development vol. 36,17-18, 2022