

Xinwen Wang

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Education

Computer Science Ph.D.	Cornell University	May 2023
Computer Science B.S.	Stony Brook University	May 2017

Graduate Research Experience & Projects

PhD Student ***Vegvisir Distributed System*** **2017 – present**

Vegvisir is a distributed system working with intermittently connected network on IoT devices. It consists of a tamperproof log and Conflict-free data structure(CRDT). Nodes can reconcile their data structure with others' opportunistically. I designed a reconciliation algorithm using vector timestamp for fast and low-overhead reconciliation. Furthermore, I also implemented a proof-of-concept version of the system in Java on Android. .

PhD Student ***Heterogeneous Consensus*** **2017 – present**

Implement Heterogeneous Consensus(Hetcons) on Charlotte(a ADDS). Heterogeneous Consensus (Hetcons) is a consensus algorithm based on Leslie Lamport's Byzantine Paxos. Hetcons allows different learners to specify their own quorums of acceptors, different failure assumptions, and even mixed failure models. This allows two learners to achieve a consensus as long as there is an intersection between their failure assumptions and quorums.

Undergraduate Research Experience & Projects

Student(Senior Project) ***BetrFS(OSCAR Lab) at Stony Brook University*** **2016 – 2017**

The B⁺-tree File System, or BetrFS, is an in-kernel file system that uses B⁺ trees to organize on-disk storage. I was working on designing an algorithm that let B⁺-tree split its nodes wisely in order to improve efficiency of renames in the file system.

Research Assistant ***ICLab at Stony Brook University*** **2015 –2016**

ICLab is a research platform to enable repeatable and representative studies of a broad class of online information controls, such as traffic differentiation, censorship and content modification. I developed a headless browser by using selenium, which is a web browser automation.

Teaching Assistant:

- CS3410 Computer System Organization and Programming (Spring 2019, Cornell)
- CS5412 Cloud Computing (Spring 2018, Cornell)
- CS2110 OOP and Data Structure (Fall 2017, Cornell)

Extracurricular Activities

Stony Brook Computer Science Honor Program	2016 – 2017
Academic Achievement Award	2014 – 2015
honored students with 4.0 GPA in the semester	
Dean List	2014 – 2016