

Wen Fan

Email.: fan372@purdue.edu

Tel.: (+1) 765-694-9073

Homepage: <https://fanweneddie.github.io/>

EDUCATION

Purdue University

West Lafayette, USA

Aug. 2022 – Present

Major: Computer Science

Degree: Ph.D. (expected)

Advisor: Prof. Yongle Zhang

University of Science and Technology of China (USTC)

Hefei, China

Sept. 2018 – Jun. 2022

Major: Computer Science and Technology

Degree: Bachelor

GPA: 3.75/4.3

RESEARCH INTEREST

Distributed Protocol, Formal Method

RESEARCH EXPERIENCE & PROJECTS

Consensus Protocol Synthesis

Ph.D. student at Purdue University

Advisor: Prof. Yongle Zhang

May. 2023 – Present

Vicious Cycles in Distributed Systems

Ph.D. student at Purdue University

Advisor: Prof. Yongle Zhang

June. 2022 – Apr. 2023

We investigated a type of failure in distributed systems, where an event causes a system degradation and it further causes more events. I joined half-way in this project.

- Collected some cases of those failures on Apache Jira.
- Tried implementing a static analyzer on retry pattern in distributed systems such as Hadoop.

Cflow: Static Taint Analysis on Java Application

Remote summer intern at UIUC

Advisor: Prof. Tianyin Xu

Jul. – Oct. 2021

Cflow is a static taint analysis tool with two limitations: non-deterministic output and many false-positives, and I tried to solve these problems as my first attempt in research.

- Analyzed the source code and output of Cflow to find out the reasons for these two problems.
- Added flow information for each statement to solve the non-deterministic path reconstruction.
- Implemented points-to analysis and field-use analysis to reduce false positives.

DSLAB (Sharded and Fault Tolerant Distributed Key-Value Store)

CS505 project at Purdue University

Developed from University of Washington, DSLAB is a framework for building and debugging distributed systems for educational purposes. I did this lab with my friend and passed most of the tests.

- Implemented Primary-Backup, Paxos and Two Phase Commit protocols.
- Debugged to pass more than 90% of tests (including searching tests on corner cases).

TEACHING ASSISTANT EXPERIENCE

Mathematical Logic, USTC *Spring 2021*

CS252 Systems Programming, Purdue University *Fall 2022, Spring 2023, Spring 2024*

CS251 Data Structures, Purdue University *Fall 2023*

AWARDS

Huawei Scholarship *Nov. 2020*