

Wenkai Zheng

☎ (+1)801-300-9004 | ✉ wenkai.zheng@emory.edu | 📷 wenkaizheng | 🌐 wenkai-zheng

Education

Emory University

M.S. in Computer Science

- Courses: Advanced Algorithm, Graph Mining, Advanced System Programming

Atlanta, GA

May 2022

University of Arizona

B.S. in Computer Science

- Courses: Computer Organization, System Programming and Unix, Operating System, Computer Network
- Honor: Dean List Academic Year Distinction

Tucson, AZ

May 2020

Technical Skills

Web Development

MySQL, MongoDB, Html, JavaScript

Software Engineering

System Programming, Network Programming, Object Oriented Programming

Programming Languages

C, C++, Python, Java, Go, Assembly, (Linux) Shell

Work Experience

Research Assistant in Computer Network Lab

Supervised by Prof. Beichuan Zhang in University of Arizona

- Developed a Html web page for Named Data Network (NDN) video watching website.
- Developed command line tool for network characteristic analysis based on NDN, including processing data from servers such as round-trip-time, jitter, segments and performing data visualization through Python GNU plot.
- Developed a script by Google Drive API for monitoring and recording insertion, update, deletion of files from cloud, and if any changes are detected, the script will start to download, encode, package and chunk files into NDN file server based on MongoDB.

Tucson, AZ

Aug. 2019 - Aug. 2020

Teaching Assistant for System Programming and Unix

Worked with Dr. Eric Anson in University of Arizona

- Graded the programmings assignments, exams and quizzes.
- Held weekly office hours to assist students solving class-related problems.

Tucson, AZ

Jan. 2019 - May 2019

Projects

Reversi Game

- Constructed MVC model and observer pattern to develop a Reversi Game.
- Achieved user-user and user-AI competition and applied the current maximal strategy for AI to follow.
- Established the TCP connection for two players which allow them to play as server and client.

Mini Version of OneNote

- Adopted Jave.io library to enable auto-save features regarding each section and page.
- Adopted JavaFx to create a panel for users to draw erasable graphs and type erasable words.
- Adopted Java.net library to achieve video playing and website visits in the panel.

Telnet Proxy

- Implemented heartbeat mechanism to check the connection between two ends.
- Enabled reliable transmission by saving packets which do not get expected ACK into local linkedlist when losing connection with server proxy, and resending those packets when the connection is reestablished.

IP Router

- Constructed the Ethernet packet including the IP packet and the ARP packet.
- Simulated BoardCast, UniCast and Arp caching processes to correctly send and receive packets.

Mini Version of ShadowSocks

- Implemented time randomized encryption to decode and encode the network packets amongst network firewall.
- Verified and responded to network packets based on Socks5 protocol.
- Created sessions for each user and handled requests (HTTPS/HTTP) from all users simultaneously by Goroutines.