

Ziyang Song

COMPUTER SCIENCE / ELECTRICAL ENGINEERING

OBJECTIVE

To pursue a Ph.D. in distributed computing and algorithms, and to design a network edge for enhanced efficiency and security, motivated by an insatiable curiosity. I aspire to become a distinguished researcher and educator, contribute to impactful projects, publish in prestigious journals, and engage with international conferences. My goal is to inspire future generations and continue my academic journey with post-doctoral opportunities.

PROJECTS

DISTRIBUTED COMUPTER EMULATORS

Jul. 2023 – Jan. 2024

- Emulator in Linux.

Programmed in C++, it provides a plug-and-play testing environment and allows experimenters to configure multiple distributed processes with different pseudo IP address and port and arbitrary delay matrix and connectivity. It inherited from the UDP structure and is added TCP support. [More >>](#)

BUILDING NETWORKED SYSTEM SECURITY

Jan. 2023 – Mar. 2023

- Demo networked system setup for a company.

It is a team-of-3 project implementing security methods (certificates, encryptions, VPNs, etc.) to a functional server (web services and file transfers). I use OpenSSL programming to generate root and intermediate CA, maintain and manage database, and issue certificates with authentication and revocation test. [More >>](#)





ELECTRONICS PROCESS SUMMER INTERNSHIP

Jul. 2021 – Aug. 2021

- Audio player with multiple functions.

It is by MSP430 series mini-controller programming in C, using infrared & ultrasound sensors for simple gesture detections of pause / play / next, with an 8*8 LED array to display figures matching the rhythm of music, assembling with laser-cutting outer package made in CAD. [More >>](#)

CONTACT

 Chiron19.github.io
 ziyang_song@outlook.com
 +41 779927259
 Lausanne, Switzerland

ABOUT ME

I am a diligent and conscientious student. I am self-motivated for knowledge and like reflecting theories onto real project practices.

EDUCATION

M.Sc. Information and Network Engineering (Ongoing)

*KTH Royal Institute of Technology
2022 – 2024 Stockholm, Sweden*

- GPA: 4.67/5.00
- Track: Networked Systems
- Exchange: 2023/24 Autumn EPFL
Lausanne, Switzerland

B.Eng. Electronic and Information Engineering

*Harbin Institute of Technology, Shenzhen
2019 – 2023 Shenzhen, China*

- GPA: 88.5%
- Major: Communication Systems

STUDENT ACTIVITIES

Class Assistant

Publicity Committee

Sep. 2019 – Jun. 2022

- Organizing activities, making posters, writing news, running class social media, taking photos.

Microsoft Students' Club

Member, Club Director

Oct. 2019 – Aug. 2021

- Organizing teaching activities, clubs' science festivals, running creative projects.

ACM Contest Team

Member

Oct. 2020 – Feb. 2022

- Training coding skills in C++ to get nominated participating algorithm contests on campus, ACM/ICPC, CCPC etc.
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SKILLS

Programming Languages

- Advanced: C/C++, LaTeX
- Intermediate: HTML, Python

Natural Languages

- Chinese (Cantonese, Mandarin)
- English (IELTS 6.5 – L 6.5/R 7.0/W 6.0/S 6.0)
- Swedish, French, Japanese (Beginner)

Sports

- Swimming (National II)
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HOBBIES

Swimming, Badminton, Hiking,
Cooking, Reading, Movies & Photos

PROJECTS

QUAD ROTOR DRONE WITH WEIGHT LIFT

Oct. 2021 – Mar. 2022

Raspberry PI micro-controller-based programming in Micro Python, using PID control in velocity loop for rotor control, using Simulink to calibrate the transfer function, using wireless communication port to connect & expanding the control system into the algorithm of auto cruising, obstacles avoiding & route planning, and ensuring stability. [More >>](#)

WECHAT MINI-PROGRAM FOR MAKER-SPACE

Nov. 2020 – May 2021

Online mobile-adapted WeChat Mini-program, published in the store. This project is for club information's release & promotion. Main functions are real-time news & message synchronization with HITsz official website, club's media articles updating, and club member info-integration. Elegant UI front-end design based on HTML / CSS, reference to open resource, friendly interaction & smooth vision. [More >>](#)

CORE COURSES

Distributed Algorithms (EPFL), Concurrent Computing (EPFL), Machine Learning (EPFL), Internetworking (KTH), Networked System Security (KTH), Wireless Networks (KTH), Image Processing (HITsz), Signal and Systems (HITsz), Digital Signal Processing (HITsz), etc.

ACHIEVEMENTS

Grants & Honors

- Scholarship for Oversea Student 2022
- Scholarship for Undergraduate Student 2021
- Scholarship for Undergraduate Freshman 2019

Prizes & Awards

- Computer System Development Capability Competition-2022 National Third Prize
- Huawei Sweden Hackathon 2022, Final List
- COMAP-2022 Successful Participants
- CUMCM-2021 Provincial Third Prize
- The 12th Lan Qiao Cup Provincial First Prize in C++ Group, 2021 (National Software and Information Technology Competition, top 10%)