Shang Liu [1]

shang.liu@louisville.edu | https://liuup.github.io | https://github.com/liuup

Education

University of Chinese Academy of Sciences | Beijing, China Aug 2022—Jun 2025(Expected)

- Institute: Shenyang Institute of Computing Technology, Chinese Academy of Sciences.
- GPA: 3.53/4.0, M.Sc. in Computer Technology. Supervisor: Prof. Zhenyu Yin.

Shenyang Aerospace University | Shenyang, China Sept 2018—Jun 2022

- GPA: 3.16/4.0, B.E. in Computer Science and Technology.

Academic Experiences

- Zhenyu Yin*, **Shang Liu** and Guangyuan Xu. "DrLLM: Prompt-Enhanced Distributed Denial-of-Service Resistance Method with Large Language Models". ICASSP 2025. https://doi.org/10.1109/ICASSP49660.2025.10889735.
- Zhenyu Yin*, **Shang Liu** and Guangyuan Xu, Feiqing Zhang. "MVAE: Intrusion Detection Method for Biflow MQTT traffic In IoT Networks". CCDC 2025, https://doi.org/10.1109/CCDC65474.2025.11091131.
- Zhen Huang, **Shang Liu**, Ke Zhao and Yong Xiang*. "TDAT: A Real-time Two-stage DDoS Attacks Detector Based on Anomaly Transformer". ICONIP 2024, https://doi.org/10.1007/978-981-96-6591-4_5.
- Zhen Huang, **Shang Liu**, Ke Zhao and Yong Xiang*. "GMCB: An Efficient and Light Graph Analysis Model for Detecting Carpet Bombing DDoS Attacks". ICCC 2024. https://doi.org/10.1109/ICCC62609.2024.10942215.
- Cen Gao, Ke Zhao, Jianbo Huang, Zhen Huang, **Shang Liu** and Kexin Zhang*. "Reconstruction-based Spectrogram Augmentation for Anomalous Sound Detection System". ICCC 2024. https://doi.org/10.1109/ICCC62609.2024.10942268.
- Invited to have conference report on CCDC 2021 Machine Gaming Special Subject: "Research and Implementation of Surakarta Computer Game Algorithm". http://computergames.caai.cn/info/news20200820.html.
- Conference Reviewer of ICONIP 2024, IJCNN 2025, ICONIP 2025.

Honors and Awards

- Merit Students (Top 15%) in University of Chinese Academy of Sciences. Mar 2023
- Second prize of National Undergraduate Student Robot Competition 2021 North Division. Aug 2021
- Third prize of Mathematical Contest in Modeling of Liaoning province. Dec 2020
- Third prize scholarship (Top 20%) in Shenyang Aerospace University. Jun 2020
- First prize of Innovation in Engineering Training Foundation in Shenyang Aerospace University. Apr 2020
- Third prize scholarship (Top 20%) in Shenyang Aerospace University. Oct 2019
- First prize of 13th Chinese College Students Computer Game Competition. Oct 2019
- Outstanding Volunteer of Liaoning Province Undergraduate Computer Game Competition. Jun 2019
- Academic Technology scholarship (Top 25%) in Shenyang Aerospace University. May 2019

Skills

- **Programming:** Python/Golang/C++.
- **Teamwork:** Overleaf/LaTeX/Git/Linux/Docker/MySQL.

Projects

github.com/ccfddl/ccf-deadlines | Contributor May 2024—Now

- Project ccf-deadlines dedicates to provide accurate top conference deadlines included in CCF rank list for academic workers. I track the top conferences deadlines and update it on the Github. Commits Rank 13/189.
- Github commits history: https://github.com/ccfddl/ccf-deadlines/commits/main/?author=liuup

RoboMaster Competition | Host computer vision algorithm developer Jun 2019—Jun 2021

- Use MATLAB to calibrate the camera's internal and external parameters, use OpenCV for image preprocessing, and perform target recognition and pre-classification based on geometric features.

[1] Chinese name is 刘 上. This CV is generated at 2025-08-20 21:08 (UCT+0) by LaTeX.

- Based on the pre-classification results, YOLOv3 is deployed on NVIDIA TX2 to identify specific moving targets, and Kalman filtering is used to predict the target motion path and perform posture calculation.
- Develop serial communication protocol to send angle calculation data to the lower computer to drive the robot movement.

Internship

Momenta | Golang&Python Backend R&D Intern | Beijing Mar 2023—Aug 2023

- **Account management platform.**
  - Develop an account management platform on the self-built LDAP database to realize the authentication and management functions for each account.
  - I implemented the CAPTCHA sending function using AliCloud SMS, and used Redis for CAPTCHA expiration validation and interface flow limiting function.
  - Use gocron to create asynchronous tasks that send notifications to user' Lark when their account information changes.
  - Use go-ldap library to realize the management of LDAP and do logging trace, and use go-testing to write unit tests for some functions.
  - Accelerate the project image packaging process with Docker multi-stage builds.
- **Data Customs.**
  - Developing intermediary platforms to realize access verification and isolation control functions for sensitive data between overseas offices and the mainland.
  - Use gin+gorm as the backend framework to listen to Lark's user approval tasks and open temporary access to data based on approval information.
  - Write Keycloak jwt backend parsing middleware for user rights management.
  - Independently wrote the Access Authentication Python SDK, packaged it using Poetry and published it to the company's private repository.
- **Travel management platform.**
  - Docking to a ticketing platform for enterprise booking and subsequent order information monitoring, with differentiated functionality based on different levels of personnel.
  - According to the Lark Callback to obtain personnel information and approval status, and combined with the thirty-party Callback and self-built LDAP personnel database to display the enterprise personnel order process.
- **Mission expenses management platform.**
  - I'm using the shopspring/decimal library to calculate and round financial decimals in my development. Calling Lark APIs to implement login authentication for Lark internal application.
- **AP status monitoring.**
  - Independently write Bash scripts, use expect tool to realize Cisco AP batch auto-login, get AP performance metrics and upload them to Prometheus.

Hujiang EdTech | Python Backend R&D Intern | Shanghai Jul 2022—Aug 2022

- Using AliCloud OSS, AliCloud Serverless and Python PIL to realize the issuance of learning certificates and private watermarking effect, and adding the platform function of users scanning codes to download certificates.
- Stable interface to provide services to the public, the cumulative user call volume of 4,000+.