## Ruihan Wu

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#### Education

### Xidian University, BE in Cyberspace Security

Sept 2022 - July 2026

- GPA: 3.8/4.0
- English Language Proficiency: CET-4 638, CET-6 558
- Coursework: Data Structures and Algorithm Analysis (90), Database Principles (90), Introduction to Network Security (94), Signals and Systems (93), Modern Communication Principles (88), Modern Cryptography (93)

### **Projects**

### MetaPalace: Let you in a meta world of The Palace Museum

[website] [back-end code]

• We have achieved what the Old Palace official website could not: offering 3D artifact views through single-view reconstruction, as well as an interactive tour guide powered by LLM using RAG technology.

# UDP video transfer: enabling low-latency video transmission even over potentially unreliable networks

[website] [code]

• We used the UDP protocol to ensure fast data transfer, and implemented XOR parity for error resilience to handle packet loss effectively. Additionally, we employed dynamic resolution adjustment based on network RTT to optimize video quality in real-time, and enabled multi-IP support to handle multiple video sources concurrently.

### **GBN-protocol** animation

[code]

• a Python-based simulator with animated frame transmissions, sliding-window logic, and error handling. Enabled clear, interactive visualization of retransmission behavior and flow control, enhancing understanding of reliable data transfer in networking.

### **Awards & Honors**

Excellent Student Award, 2022-2023 Academic Year	Nov 2023
Comprehensive Development Scholarship (First-Class), University-Level, 2022-2023 Academic Year	Dec 2023
Comprehensive Development Scholarship (Second-Class), University-Level, 2023-2024 Academic Year	Dec 2024
<b>First Prize</b> (Non-Mathematics A Category), 15th National College Student Mathematics Competition	Dec 2023
First Prize, National Undergraduate Mathematical Contest in Modeling (Undergraduate Group, Shaanxi Division)	Dec 2023
First Prize, National Undergraduate Mathematical Contest in Modeling (Undergraduate Group, Shaanxi Division)	Dec 2024
SP, Mathematical Contest in Modeling 🖟	2024
Second Prize, China Collegiate Computing Design Competition Project: "AdvPull: A novel physical adversarial attack method against RGB-infrared pedestrian re-identification"	May 2024
Second Prize, 18th National College Student Software Innovation Competition Software System Security Track, Works Competition, Northwest Regional Project: "SecFed: A Trust Evaluation and Anomaly Detection System for Horizontal Federated Learning Systems" [A [PPT]	Mar 2025
National Undergraduate Innovation Training Program	2024

Project: "Fine-grained Data Unlearning for Federated Learning" (No.: 202410701220)

202410701228)

Qualified in Final Review

### **Experience**

**Software Test Engineer Intern**, FiberHome Telecommunication Technologies Co., July 2024 – September 2024 Ltd., Wuhan, China

- Assisted in **test case design**, **functional testing**, and **bug tracking** for enterprise-level telecommunication software systems.
- Collaborated with senior engineers to ensure testing coverage and software quality during the delivery phase.

### **Skills**

Python, Java, LTFX, C