

# 朱俊豪 | Junhao Zhu

☎ 13051005662    ✉ junhao16@foxmail.com  
💬 JuneDebug



## EDUCATION

### Southern University of Science and Technology

Sep 2023 - Jun 2026

Master of Computer Technology

Shenzhen

Professional courses: image video compression and network communication, advanced computer network, modern signal processing, information technology foundation, etc.

Honors: Special Scholarship for 2024 Academic Year, Outstanding Graduate Student for 2023-2024 Academic Year

### Beijing University of Aeronautics and Astronautics

Sep 2017 - Jun 2021

Bachelor of Computer Science and Technology

Beijing

Professional courses: data structure and programming, object-oriented design and construction; computer composition, operating system, compilation technology, database system principles, etc.

## Work/internship experience

### Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences

Jun 2025 - Sep 2025

Codec Algorithm intern; Institute of Advanced Computing and Digital Engineering

Shenzhen

- Responsibilities: Responsible for video codec field of cutting-edge algorithm research and reappear; responsible for part of the project's algorithm framework implementation and performance tuning.

### Beijing Even Technology Co., Ltd

Jul 2021 - Jul 2022

Test development engineer; Test research and development department

Beijing

- Responsibilities: Responsible for the functional testing and performance testing of the database actuator module, responsible for the daily functional testing of the database and system testing monitoring and reporting, according to the requirements of the completion of the test tool research and development, test platform deployment and development.

- Project experience: CI system reconstruction and optimization, test base class reconstruction, database TPC-H ranking process, test tool research and secondary development.

## PROJECT EXPERIENCE

### Underwater image compression and enhancement

Sep 2024 - Sep 2025

Master's graduation project

- Output :1. *Enhanced Quality Aware-Scalable Underwater Image Compression* (IEEE T-CSVT, Under Review); 2. *Deep Prior-Guided Conditional Diffusion Model for Underwater Image Enhancement* (IEEE SPL, Accepted)
- Background: In order to obtain high-quality underwater image data, for low-bandwidth transmission conditions and underwater imaging of low-quality images, compression and enhancement.
- Tasks :1. Propose a perceptual quality-oriented underwater image compression method; 2. Design a feature dictionary prior diffusion model underwater image enhancement method.
- Technology stack: deep learning framework (PyTorch); Variational Autoencoder (VAE) and Diffusion Model (Diffusion) and other generative model applications and improvements.

### Real-time directing and playing system based on BMF framework

May 2025 - Aug 2025

- Background: Build a set based on BMF(Babit Multimedia Framework, byte beat open source multimedia processing framework) real-time guide and playback system for multi-way RTMP video stream access, synchronization, codec, layout switching and playback.
- Implementation: Design modular architecture (WallClock, StreamHub, AudioMix, VideoLayout, Player), and build an expandable audio and video pipeline based on BMF graph calculation model. Realize unified clock and jitter buffer module; Using strategic mode to realize layout switching; Local SDL2 is used to render or re-encode and push streaming to RTMP server.
- Stack :C++ /Python, BMF, FFmpeg, RTMP, SDL2

## SKILLS LIST

- Programming Languages: C (proficient),Python (proficient),Shell (familiar)
- Deep Learning Framework: PyTorch (familiar)
- Language: CET-6, Conversational level
- Other: HEVC standard, FFmpeg use; design patterns; CI/CD ideas

