

# Guo Chen

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## EDUCATION

**Nankai University**

**Aug. 2019 – Jun. 2023**

*Bachelor of Science*

**Major:** Information and Numerical Science (the first-level discipline is mathematics, which is a national double first-class construction discipline).

**Core Courses:** Mathematical Analysis, Abstract Algebra, Data Structures and Algorithms, Mathematical Modeling, C Programming Language, Data Mining.

## RESEARCH EXPERIENCE

**Project Level: National**

**Apr. 2021 – Apr. 2023**

**Project Name:** Research and Practice on VR Experimental Teaching of Graph Theory and Combinatorial Optimization

*Responsible for software development and system integration.*

- Designed an automatic packing mode to maximize the space utilization of express trucks.
- Utilized C# and Unity to integrate the automatic packing algorithm with the VR system, creating a realistic virtual packing environment and providing an immersive teaching experience.
- Successfully applied in the actual teaching practice of more than 120 students in courses.
- Achieved 4th place out of 37 projects in the final review by the expert group, and the research results will be published jointly with subsequent researchers in the form of software copyright.

**Project Level: National**

**Dec. 2020 – May. 2022**

**Project Name:** The Impact of Social Relationship Networks on College Students' Use of Internet Financial Loans and Social Work Intervention Practice

*Responsible for data analysis and model application.*

- Utilized the logit model to analyze data collected on college students' Internet financial loans, studying the influence of social relationship networks on loan usage.
- Developed and implemented a social work intervention plan to mitigate the negative impact of online loans among college students.
- Conducted a comprehensive analysis of over 4,500 data points from more than 500 college students, earning the Excellence Award in the College Student Innovation and Scientific Research Awards.
- Successfully piloted the social work program on campus, assisting hundreds of students in understanding and managing online loans effectively.

## WORK EXPERIENCE

**Beijing Yili Technology Co., Ltd.**

**Sept. 2022 – Jan. 2023 (internship)**

**Jul. 2023 – Present (formal)**

*Image Algorithm Engineer*

- Designed image processing algorithms using a combination of traditional and AI technologies to address image quality issues in medical devices with various sensors.
- Engineered quantitative algorithms and assisted in mapping these algorithms to FPGA hardware, and in developing sensor chip motherboards.

- Received the Excellent Intern Certificate in Image Algorithms during the internship.
- Currently polishing and submitting the patent "A Noise Model Calibration and Real-time Video Noise Reduction Algorithm."
- Implemented BM3D and VST-DCT image noise reduction algorithms for 5 common endoscope sensors, and produced an image AI test set that meets industrial standards.

## OTHER SKILLS

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**English Proficiency:** CET-6, PTE score of 69 (equivalent to IELTS 7.0 according to official standards)

**Computer Skills:** Python, C/C++, LaTeX, Linux, MS Office.