

# 陈佳锐

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## 🎓 教育背景

哈尔滨工业大学（深圳），本科

2022 – 2026

- 专业：计算机科学与技术
- 学业成绩：CGPA 3.9 / 4 | 核心学分绩 92.5 / 100
- 综合排名：7 / 316, top 2%
- 英语能力：CET-4 593 | CET-6 559

## 🔬 科研与项目经历

三维重建与实时新视角合成

2024.12 – 至今

香港科技大学 IGL 访问学生

- 可泛化的动态流式视频 3DGS**：针对 GPS-Gaussian 等实时动态人体新视角合成框架存在的时序不稳定问题（闪烁/抖动），探索融合时序先验（如引入光流、记忆模块）克服逐帧预测方法的局限性。
- 3DGS 显存压缩**：首次提出以降低运行时显存（而非压缩存储大小）为目标的 3DGS 压缩框架，较 SOTA 方案显存降低近 50% 并实现可比的渲染质量，可在手机等端侧设备上流畅运行。引入球面高斯替代球谐函数作为高效颜色建模工具，并将球面瓣剪枝和基元剪枝统一建模为以显存为约束的约束优化问题，并引入代理变量等处理不可微约束。

参数高效微调

2024.04 – 2024.11

哈尔滨工业大学（深圳）ICES 中心 实习生

- 参数高效微调**：提出权重重排列与部分重参数化技术，首次解决参数选择方法与重参数化方法的兼容性问题，保留更多原始权重中的可泛化知识，在提升微调效果的同时显著降低显存开销。

基于大模型的多模态风险内容识别平台

2024.05 – 2024.11

哈尔滨工业大学（深圳）项目负责人

- 主导项目获第十九届挑战杯专项赛全国二等奖
- 核心贡献：提出感知-推理解耦的多模态风险检测框架，显著提升模型对新模态与新风险类别的可拓展性。推理层引入 RAG 提供案例证据并生成思维链（CoT），为审核决策提供强可解释性。
- 负责板块：大模型推理增强（RAG / 思维链）、推理优化、基于 LLM 的数据合成与选择

## 🏆 科研成果与开源项目

- Chen J, et al. "MEGS<sup>2</sup>: Memory-Efficient Gaussian Splatting via Spherical Gaussians and Unified Pruning".** Arxiv 2025, **ICLR 2026 (submitted)**.
- Chen T, Chen J, et al. "Sensitivity-Aware Efficient Fine-Tuning via Compact Dynamic-Rank Adaptation".** **CVPR 2025**. [paper]
- 基于大模型的多模态风险内容识别平台 [github]
- 中文短信与对话诈骗风险细粒度分类 (FGRC-SCD) [huggingface]
- ChatTTS & GPT-SoVITS 伪造音频分类数据集 (ACG) [huggingface]

## 💖 荣誉奖项

全国一等奖, 中国大学生数学建模竞赛

2023

全国二等奖, 第十九届挑战杯揭榜挂帅专项赛

2024

省级二等奖, 第十五届蓝桥杯大赛 C++ A 组

2023

哈尔滨工业大学（深圳）学业一等奖学金（前 5%）

2023-2024

Tat-Seng Chua 奖学金（前 0.5%）

2025

# JIARUI CHEN

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## 🎓 EDUCATION

<b>Harbin Institute of Technology (Shenzhen)</b> , Guangdong, China	2022 – 2026
<b>Degree</b>	B.S. in Computer Science and Technology
<b>Core GPA</b>	3.9 / 4.0, 92.5 / 100
<b>Ranking(comprehensive)</b>	7 / 316, top 2%
<b>English</b>	CET-4: 593, CET-6: 559

## 🧑‍🔬 RESEARCH AND PROJECT EXPERIENCE

**3D Reconstruction and Real-time Novel View Synthesis** Dec. 2024 – Present  
*Visiting Student, IGL-HKUST*

- **Generalizable Dynamic Streamable Video 3DGS**: Investigated temporal instability issues (flickering/jittering) in the GPS-Gaussian framework for dynamic human synthesis. Explored the integration of temporal priors (e.g., optical flow, memory modules) to improve consistency in per-frame predictions.
- **Memory-Efficient 3DGS**: Pioneered the first compression framework targeting runtime memory (over storage) for 3DGS, reducing GPU memory by 50% vs. SOTA while maintaining comparable rendering quality. Introduced spherical Gaussians to replace SH for efficient color modeling and formulated a unified optimization problem to jointly prune spherical lobes and Gaussians under memory constraints.

**Parameter-Efficient Fine-tuning** Apr. 2024 – Nov. 2024  
*Research Intern, ICES-HITSZ*

- **Parameter-Efficient Fine-tuning**: Introduced weight rearrangement and partial reparameterization, unifying two PEFT paradigms to enhance fine-tuning efficacy with reduced memory.

**LLM-based Multimodal Risk Content Recognition Platform** May 2024 – Nov. 2024  
*Project Leader, HITSZ*

- Led the project to win the **National Second Prize** in the 19th Challenge Cup Special Competition.
- Core Technology: Perception-reasoning decoupled multimodal risk content detection framework.
- Responsible for: LLM reasoning enhancement (RAG / CoT), inference optimization, and LLM-based data synthesis and selection.

## 📄 PUBLICATIONS AND OPEN-SOURCE PROJECTS

- **Chen J**, et al. "MEGS<sup>2</sup>: Memory-Efficient Gaussian Splatting via Spherical Gaussians and Unified Pruning". Arxiv 2025, **ICLR 2026 (submitted)**.
- **Chen T**, **Chen J**, et al. "Sensitivity-Aware Efficient Fine-Tuning via Compact Dynamic-Rank Adaptation". **CVPR 2025**. [paper]
- LLM-based Multimodal Risk Content Recognition Platform [github]
- Fine-Grained Risk Classification for Chinese SMS and Dialogues (FGRC-SCD) [huggingface]
- Audio ChatTTS & GPT-SoVITS Dataset (ACG) [huggingface]

## 💖 HONORS AND AWARDS

<b>National First Prize</b> , China Undergraduate Mathematical Contest in Modeling	2023
<b>National Second Prize</b> , 19th Challenge Cup Special Competition	2024
Provincial Second Prize, 15th Blue Bridge Cup C++ Group A	2023
First-Class Academic Scholarship, HITSZ (Top 5%)	2023-2024
Tat-Seng Chua Scholarship (Top 0.5%)	2025