

# BINGKUI TONG

✉ bingkuitong@gmail.com · ☎ (+86) 186-8136-1256

## 🎓 EDUCATION

### Sichuan University

*B.E. in Computer Science* **GPA:** 3.82/4 **Rank:** 12/312

Awarded Chinese National Scholarship (Top 0.2%, nationwide) in 2022-23

Chengdu, China

Sep.2021 - June.2025

### Hong Kong Polytechnic University

*Summer School*

Hong Kong, China

July.2024 - August.2024

## 📄 PUBLICATIONS

\* denotes mentorship and † indicates equal contributions

- *IMDL-BenCo: A Comprehensive Benchmark and Codebase for Image Manipulation Detection & Localization (Neurips 2024 Spotlight)*  
X. Ma<sup>†</sup>, X. Zhu<sup>†</sup>, L. Su<sup>†</sup>, B. Du<sup>†</sup>, Z. Jiang<sup>†</sup>, **B. Tong<sup>†</sup>**, Z. Lei<sup>†</sup>, X. Yang<sup>†</sup>, C.-M. Pun<sup>\*</sup>, J. Lv<sup>\*</sup>, J.Z. Zhou<sup>\*</sup>
- *Mitigating Hallucination in Multimodal LLMs with Layer Contrastive Decoding*  
(Under review: CVPR 2025)  
**Bingkui Tong**, Jiaer Xia, Sifeng Shang, Kaiyang Zhou<sup>\*</sup>
- *Beyond Visual Appearances: Privacy-sensitive Objects Identification via Hybrid Graph Reasoning*  
(Under review: CVPR 2025)  
Zhuohang Jiang<sup>†</sup>, **Bingkui Tong<sup>†</sup>**, Xia Du, Ahmed Alhammadi, Jizhe Zhou<sup>\*</sup>
- *Enhancing Knee Contact Force Prediction Using Transformer Networks: A Comparative Study with LSTM and MLP* (Under review: Journal of Biomechanics)  
Fashu Xu<sup>\*†</sup>, Junqing Wang<sup>\*†</sup>, **Bingkui Tong**, Hui Zhang, Tao Deng, Qu Wei, Yong Nie, Kang Li

## 🏗️ RESEARCH PROJECTS

### Mitigating Hallucination in Multimodal LLMs with Layer Contrastive Decoding

\*An Ra project

Hong Kong Baptist University

Advisor: Prof. Kaiyang Zhou

Mar.2024 - Present

Introduction:

- Currently, multimodal foundation models commonly suffer from hallucination problems, such as the inability to accurately identify objects, attributes, and relationships within images. Additionally, there are deficiencies in the evaluation methods of related benchmark datasets. We aim to propose a comprehensive dataset and further address the hallucination problem by proposing novel method.
- As the core leader of the project, I was responsible for ideation, validating concepts, conducting experiments, and writing the paper. The work is **under review at CVPR 2025**.

### IMDL-BenCo: A Comprehensive Benchmark and Codebase for Image Manipulation Detection & Localization

Sichuan University & University of Macao

Advisor: Prof. Chi-Man Pun, Prof. Jiancheng Lv, Prof. Jizhe Zhou

May.2024 - June.2024

Introduction:

- The first comprehensive IMDL (Image Manipulation Detection & Localization) benchmark and modular codebase. IMDL-BenCo standardizes the IMDL framework into reusable components, improving coding efficiency and customization flexibility
- In this project, I was involved in the overall design of the code structure, implementation of partial testing modules, and refactoring existing IMDL models to align with the framework.
- The paper for this project has been accepted by **NeurIPS 2024 as spotlight**, with me as the co-first author.

## Beyond Visual Appearances: Privacy-sensitive Object Identification via Hybrid Graph Reasoning

Sichuan University

Advisor: Prof. Jizhe Zhou

Sep. 2023 - Jan. 2024

Introduction:

- Traditional Privacy-sensitive Object Identification (POI) methods, which rely on visual features, often result in poor performance and coarse granularity. This work interprets the POI task as a visual reasoning task aimed at assessing the privacy of each object in the scene and proposes the PrivacyGuard framework for POI.
- In this project, I was responsible for coding, collecting datasets, and part of paper writing. The work is **under review at CVPR 2025**.

## Enhancing Knee Contact Force Prediction Using Transformer Networks: A Comparative Study with LSTM and MLP

Biomedical Big Data Center, West China Hospital

Advisor: Prof. Fashu Xu, Dr. Junqing Wang

Aug.2023 - Dec.2023

Introduction:

- The goal of this project was to develop an exoskeleton wearable device to assist patients with walking difficulties in completing a full gait cycle. The process involved using IMUs attached to patients to collect motion data, which were then fed into time series prediction models. These models predicted the forces the exoskeleton needed to provide for patients to achieve a regular gait.
- In this project, my responsibilities encompassed the processing of raw data and the development of the prediction model. The paper for this project is **under review of Journal of Biomechanics**.

## LEADERSHIP EXPERIENCE

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### Covariant Innovation Computer Association of Sichuan University

Chengdu, China

President of the academic student association

Sep.2023 - June.2024

Introduction:

- Conducted engaging lectures and classes outside of the regular curriculum to educate students on programming, which received positive feedback from students.
- Fostered a collaborative environment for open-source software development at Sichuan University.

## HONORS AND AWARDS

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Chinese National Scholarship (Top 0.2%, nationwide)	2022-2023
Merit Student Award, Sichuan University	2021-2023
Comprehensive First-class Scholarship, Sichuan University (Top 3%)	2022-2023
Comprehensive Second-class Scholarship, Sichuan University (Top 7%)	2021-2022
National Third Prize in "China software cup" College Student Software Design Competition	Aug.2023

## SKILLS

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- **Programming:** Python (PyTorch, Django), Java (SpringBoot), C/C++, HTML (Vue)
- **Data and Tools:** Linux, MySQL,  $\LaTeX$
- **Language:** English - Fluent (IELTS 7.5; GRE 330+3.5), Mandarin - Native speaker