# Boren Ding

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## Academic Homepage

#### **EDUCATION**

Geely University Chengdu, China

B.Eng. in Computer Science and Technology

Sep 2020 - Jun 2024

- GPA: 85/100 (**Top 1%**).
- Core Courses: Operating Systems (99), Discrete mathematics (92), Network Programming (98), Mobile Application Development (97), Distributed Storage and Computing (94), Python Data processing (92).

## SCHOLARSHIPS & AWARDS

National Scholarship (Highest scholarship awarded by Chinese government, $\mathbf{0.2\%}$ )	2023
Sichuan Provincial Outstanding Graduate Award (Top honor awarded by Sichuan Province, $1\%$ )	2023
Achievement Scholarship (Awarded to the top $1\%$ in the department)	2021-2023
Merit Student of the School (Recognized as the $\mathbf{Top}\ 5\%$ in the school)	2022
1st Provincial Prize at Chinese Undergraduate Computer Design Competition	2021
2023 Provincial Prize at China College Students' 'Internet+'Innovation and Entrepreneurship Competition)	2023
Successful Participant, Mathematical Contest in Modeling	2023
Top ten Excellent volunteers	2023
Academic Star of the College	2021-2023

#### SERVICE

Research Intern at Geely Group Central Research Institute-Autonomous Driving Department	2023 - Present
Founder of Ren-Ke (Startup Company)	2022 - 2023
Person in Charge, Provincial College Students Innovation and Entrepreneurship Training Program	2022
Person in Charge, National College Student Innovation and Entrepreneurship Training Program	2022
Member, Provincial Model Team of the Three Down to the Countryside Volunteer Program	2021

# **PUBLICATIONS**

- LL-Diff: Low-light image enhancement utilizing Langevin sampling diffusion
  - B. Ding, X. Zhang, Z. Yu, F. Tan, H. Song

Published at International Journal of Pattern Recognition and Artificial Intelligence(IJPRAI) Paper

- Deep Constrained Clustering with Active Learning
  - D. Huang, R. Wen, **B. Ding**, J. Li

Published at Studies in Informatics and Control (SIC), 2023, 2023-9 Paper

#### RESEARCH EXPERIENCE

## LL-Diff: Low-light Image Enhancement Utilizing Langevin Sampling Diffusion

Geely University

Collaborator: Dr. Zhang Xuefeng

Apr 2023 - Present

• Formulated ideas; Existing diffusion models (DM) yield higher-quality samples, but come with longer evaluation and computation times, leading to inefficiencies.

- Proposed a universal post-processing method for low-light image enhancement, which can be built upon various existing low-light enhancement algorithms, taking them as input for additional quality improvement.
- Redesigned Langevin dynamic sampling and incorporated causal attention mechanism to generate higher quality samples at a faster rate, solving complex image generation enhancement problems while avoiding excessive enhancement.
- Published a first-author paper to International Journal of Pattern Recognition and Artificial Intelligence (IJPRAI).

#### Deep Constrained Clustering with Active Learning

Geely University

Advisor: Mr. Huang Dan

Dec 2022 - Apr 2022

- Formulated ideas; existing deep semi-supervised clustering methods cannot make full use of the redundancy of data and query strategies, resulting in reduced model performance.
- Proposed a new deep semi-supervised clustering framework that utilizes consistent regularization technology and self-learning to exploit pairwise constraints and unlabelled data.
- Introduced a query strategy for querying paired data in the pseudo-Siamese network that combines traditional confidence-based querying with model uncertainty strategy used in deep active learning.
- Published a Third-author paper to Studies in Informatics and Control (SIC).

## Holographic Embedding of Knowledge Graph for Recommendation

Geely University

Advisor: Mr. Jiyuan Ding

Sep 2022 - Nov 2022

- Developed a knowledge graph recommendation system, involving the building of a collaborative knowledge graph, construction of a graph neural network, and introduction of an attention mechanism to explore higher-order connections more explicitly.
- Integrated auxiliary information into entities using holographic embedding. Learned the inference relationship of each entity to aggregate information from neighboring entities.

### Woke Experience

#### Geely Automobile Company

Perception Algorithm Engineer Inter

Oct 2023 - 2024

- Main responsibilities involve participating in the research and implementation of visual perception algorithms for the automated parking system. This includes target detection, closed-loop data processing to enhance vehicle perception capabilities.
- Assisting in the development and updating of high-precision perception processing modules, ensuring accuracy during the parking process. Official Website

#### CometAPI Company

AI Workflow Developer

Mar 2025 - Present

 Leveraged CometAPI's API integration capabilities to combine various AI models and develop automated workflows, improving task efficiency and accuracy.
 Official Website

#### Distributed Cloud Rendering Web

Ren-Ke (Startup Company)

Tech Lead (part-time) in ChengDu Ren-Ke Technology Co., Ltd.

Jun 2022 - May 2023

- Accelerated clothing image design via distributed and cloud computing, enabling faster processing and successful frontend/back-end deployment.
- Led project technically, translating product requests into specs and ensuring quality via agile development.

# SKILLS

Programming Languages: Python, JavaScript, SQL, JAVA.

Deep Learning Framework: TensorFlow, Keras, Pytorch.

Language Proficiency: Chinese(Native), English(Fluent).

Soft Skills: Time Management, Event Management, Public Speaking, Leadership.

**Hobbies:** Skiing, customized keyboard, board games, tea art, and traveling.