Zijun Gao

+86-198-5972-1683 | zjgao@mail.sdu.edu.cn | https://zjgao02.github.io/|

EDUCATION

Shandong University   Jinan, China
Bachelor of Software Engineering   *2020.09 – 2024.06*
- **GPA:** 92.13/100 | **RANK :** 16/333 | CET-4 : 569 | CET-6 : 463
- **Main courses:** Advanced Mathematics (100/100); Linux Application (96/100); Computer Organization and Structure (96/100);Linear Algebra (96/100); Data Structure (92/100)

RESEARCH EXPERIENCE

Intelligent Data Engineering and Analysis IDEA Lab   2022.03 - 2022.12
*Research Assistant | **Supervisor:** Guoxian Yu and Jun Wang*   *Jinan, China*
  ∗ Project Topic: Cross-modal hashing
  ∗ Publish a paper: Long-tail Cross-Modal Hashing **(First author, AAAI 2023 Oral, CCF-A)**
  ∗ The paper studies how to achieve cross model hashing on the prevalence long-tail multi-modal data, which is a practical and important, but largely unexplored problem. I propose a long-tail cross-modal hash learning framework, **LtCMH**, which combines individuality, commonality, and extracted features to create meta-features, enrich tail-label representation, and generate hash codes. Experiments demonstrate that LtCMH significantly improves retrieval performance on long-tail datasets.

Peking University   2023.01 – Present
*Research Intern| **Supervisor:** Shanghang Zhang*   *Beijing, China*
  ∗ In a research project on the efficient fine-tuning of large multimodal models, I examined existing methods and found that adapter learning-based methods have limitations in correcting the inductive bias of the backbone network and distinguishing features at different levels.
  ∗ To address the limitations of existing algorithms, I designed a simple and efficient fusion feature adapter structure. As the first author, I plan to submit this paper to NeurIPS-23 (CCF A).

PROJECTS

Parallel Optimization Competition of Big Data Pan-structure Support Point Selection Algorithm

2022.09 – 2022.12
  ∗ The program's running duration was reduced from 600,000 milliseconds to 300 milliseconds, resulting in nearly 2,000 times acceleration and first place in the performance optimization competition.
  ∗ Based on the OpenMP parallel programming model, it realizes coarse-grained algorithm optimization (sorting, point selection, etc.) and fine-grained algorithm optimization (calculation memory access, vectorization).

MoniTeeth Intelligent Orthodontics Entrepreneurship Project | *Provincial Bronze Award, First Leader*

2021.09 – 2022.08
  ∗ Aiming at the pain points of the orthodontics industry, organize students to conduct market research and analysis and put forward a brand new full-process intelligent orthodontic solution.
  ∗ Participated in multiple technical topics such as registration and fusion of multi-modal dental data, automatic quantification of dental features, etc., developed a portable mouth scanner equipped with a binocular camera and developed a smart medical app adapted to it.
  ∗ This project originates from a national key research and development project, has reached cooperation with three hospitals, has been recognized by many companies, and has been praised by doctors and patients.

HONORARY AWARD

2020-2021 | National Scholarships | First Class Scholarship (Academic/Entrepreneurship)
2020-2021 | National Third Prize in National Undergraduate Mathematics Contest
2021-2022 | Bronze Award in the "Challenge Cup" Competition (Provincial Level)
2021-2022 | Bronze Award in the China College Students "Internet+" Innovation and Entrepreneurship Competition (Provincial Level)