To Prospective Students

If you are interested in a **research assistant position (Ph.D. students, M.S. students, visiting research interns)** in my lab, please read the following carefully.

Self-Introduction

My name is **Huan Wang** (王欢, he/him/his), an incoming **Tenure-Track Assitant Professor** at **Westlake University** (Hangzhou, China), principal investigator (PI) of **ENCODE Lab** (Efficient Neural Computing and Design Lab). I earned my Ph.D. (2024) at Northeastern University (Boston, USA). Before that, I spent seven wonderful years at Zhejiang University (Hangzhou, China) to get my bachelor's and master's degrees. I mainly work on **Efficient AI.** I have collaborated closely with fantastic industrial researchers from Google, Snap, MERL, Meta, Alibaba, *etc*. Welcome to check my webpage for more information.

Lab Introduction

- **General background.** Westlake now has 4 schools. I am in the **School of Engineering** (工学院**)**, which has 6 programs. I am with the *Artificial Intelligence and Data Science (AI)* **program**. For Ph.D. and master students - before you consider our lab, it is advisable to know more about Westlake. As is known, Westlake is quite new and a bit different from many other universities. Make sure this is the right place you want to spend your next several years.
- **Research directions of the lab.** I am interested in a variety of topics in CV & ML, but at this point, the lab is most focused on **Efficient AI in various tasks (e.g., GenAI, 3D modeling, low-level vision**), specifically,
    - typical efficient AI methods, such as network pruning, quantization, distillation, low-rank decomposition, efficient architecture design or search, *etc*;
    - text-to-image / video, LLM/MLLM, *etc*;
    - neural rendering, avatars, animation, talking head or face, *etc*;
    - system design - how to design an effective efficiency portfolio that features optimizations in multiple axes like model architecture, data curation, and training strategy.
    - (please refer to my webpage for more details of my past research.)
- **Advising style and lab culture.**
    - I am pretty **hands-on.** I'll regularly meet with you, have discussions, help write the paper, and code (if you need), *etc*., especially for junior students.
    - Meanwhile, you will have **sufficient freedom** to develop your ideas and capabilities.
    - We value an **equal, chill, and creative** working environment. Essentially, we are colleagues at Westlake, working together to solve challenging scientific and engineering problems.
- **What we provide.**
    - **Research-oriented projects** with competitive compensations and a comfortable working environment.

- ○ We encourage students to do research-oriented **internships**. We will do our best to help find opportunities.
- ○ We encourage students to **attend academic conferences** (either domestic or international) with reimbursements.

Qualifications / Which Students We Prefer

1. The prospective students are encouraged to be a "三好学生" ("Merit Students in Three Aspects"), which is due to the beloved Dr. Jian Sun when he once gave a talk at Zhejiang University:
   - **Good at math** ("数学好") - Familiar with the fundamentals of ML (such as linear algebra, calculus, probability theory, statistics, *etc.*)
   - **Good at coding** ("编程好") - Strong coding ability with Python, C++ (CUDA programming). Proficient with deep learning platforms like PyTorch / TensorFlow -- *This is important!*
   - **With good attitude** ("态度好") - Good attitude, to me, mostly means
     - ○ **You know why you are here** - Whether it is for dreams, grand research vision, or potential good job opportunities on the market, you *really* think it over and be committed to it.
     - ○ You have a very **strong motivation** to explore, hoping to contribute something valuable to the community. As a result, **never give up** when setbacks happen to you in research (as they are quite often..), and **keep positive**[1]!
     - ○ You act on the responsibility to yourself and your colleagues.
2. Publications are preferred but not a must.

Openings

- Our lab plans to recruit **2~3 Ph.D. students, and several M.S. students, for 2025 Fall**.
- Starting in 2024 Summer, we have **many paid visiting research intern positions** (*esp.* for those who plan to join our lab). The expected visiting time is **2~3 months**.

How to Apply?

- Send me an email[2] at wanghuan@westlake.edu.cn, attaching
  - ○ **your CV** (including, if any, your personal webpage, Gitbub link, Google scholar, *etc.*),
  - ○ **your transcripts**,
  - ○ and other materials that you think can uniquely tell your story.
- We shall arrange an **online interview** (actually, it's a pretty chill chat) to see if it is a good match for us to work together. You shall present your research work, and I shall ask questions about it. After that, you will have the chance to ask me questions.
- It is advised to apply early.

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[1] Okay, being negative for a while is actually not that bad :-)

[2] Due to workload, please understand that I am not able to reply to every email.