Welcome to **TJU XR-ROB LAB**!

1. Introduction

Hello and welcome! I am Shan An, director of the XR-ROB LAB at Tianjin University, China. I hold a Ph.D. in Computer Science from Beihang University and have extensive experience in both academia and industry. My professional journey has included significant roles at JD.com, Alibaba, and the China Academy of Space Technology. Over the years, I have led numerous groundbreaking projects, such as JD's AR Makeup and AR Shoe, which not only generated billions in revenue but also set new industry standards.

I have published over 40 research papers in top-tier journals and conferences, and hold 30+ patents in China, with additional patents granted in the US, Japan, and Russia. My main research interests now lie in **Extended Reality (XR)** and **robotics**, where I aim to push the boundaries of human-computer interaction and intelligent systems.

We are excited to bring motivated individuals into our innovative and collaborative research environment at **Tianjin University**. Together, we will explore new frontiers in robotics, XR, and beyond.

2. Research Areas

At TJU XR-ROB LAB, we focus on the convergence of cutting-edge technologies to create transformative experiences. Our core research directions include:

1. **Extended Robotics Reality**

This interdisciplinary research area merges extended reality technologies (AR, VR, MR) with robotics. Our goal is to create immersive human-robot interactions, making robotic systems more intuitive and efficient. XR2 has applications across industries, from industrial automation to healthcare, enabling users to remotely control and collaborate with robots in real-time through interactive virtual environments.

2. **Computer Vision**

We develop advanced algorithms for visual perception, enabling machines to understand and interact with the world as humans do. Our work supports various applications such as augmented reality, intelligent medical diagnostics, and product recognition for e-commerce platforms.

3. **Dexterous Manipulation**

Robotics is evolving rapidly, and our research aims to enhance the capabilities of robotic hands. We are creating more nimble and adaptive manipulation techniques that allow robots to handle complex tasks in dynamic environments. Our projects include fast hand gesture recognition and autonomous manipulation systems, with applications in industrial automation, healthcare, and beyond.

3. Policies at Tianjin University

Tianjin University (TJU) offers an encouraging and supportive environment for researchers. As one of China's top engineering institutions, TJU is dedicated to fostering innovation and excellence. Our policies include:

1.CSC Scholarship for International Students

TJU offers a generous scholarship for international students through the Chinese Government Scholarship (CSC) program. This scholarship provides a monthly stipend of **3500 RMB**, making it easier for students to focus on their studies and research without financial concerns.

2.Research Funding and Support

TJU provides substantial funding for research initiatives, with access to cutting-edge facilities and resources. We support interdisciplinary research and collaboration both within China and internationally.

3.Flexible Learning and Development Opportunities

Students and researchers have access to a wealth of workshops, seminars, and conferences, where they can present their work and learn from global leaders in the field. TJU's collaborative culture is designed to support independent thinking and innovative problem-solving.

4.Living in Tianjin

Located in the vibrant city of Tianjin, the university offers a welcoming environment for both domestic and international students. With state-of-the-art labs, a family-friendly atmosphere, and a rich cultural experience, TJU is the perfect place to grow both personally and professionally.

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