

# Ke Tan

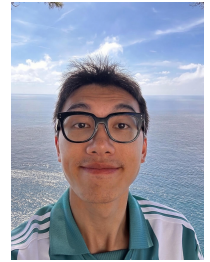
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## ABOUT ME

Master's student in Data and Computer Science. Work on embodied AI in PyTorch, including VLA policy learning and world-modeling pipelines, and document insights in technical notes.

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## EDUCATION

### Heidelberg University

*Master of Science in Data and Computer Science*

Nov 2024 – Present

Heidelberg, Germany

- Relevant coursework: Generative Neural Networks, Computer Vision, Reasoning with LLMs, Intelligent System

### Macau University of Science and Technology

*Bachelor of Schiencie in Computer Science*

Sep 2020 – May 2024

Macau, China

- Ranked in the Top 5%; Best Final Year Project - Macau Peninsula Route Planning System

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## PROJECTS

### Reproducing RT-1-Style Vision-to-Action Policy | *PyTorch, VLA, Transformer, Robotics*

Jan 2026

- **Context:** tried to build a minimal runnable RT-1-style pipeline to connect model, training loop, and logging
- **Action:** implemented a minimal RT-1-style Transformer policy and a Behavior Cloning training loop in PyTorch to establish a runnable pipeline connecting model, training, and logging
- **Result:** documented the implementation in a public [repo](#) with detailed [notes](#) on implementation details

### Reproducing Diffusion Policy for Visuomotor Control | *PyTorch, VLA, Diffusion Models, Robotics*

Jan 2026

- **Context:** tried to re-implement the training and sampling codepaths of Diffusion Policy end-to-end
- **Action:** re-implemented diffusion-based action generation in PyTorch, covering the sampling and training
- **Result:** packaged the work as a reproducible [repo](#) and summarized key technical learnings in [technical notes](#)

### Edge Refinement for Light Field Disparity Estimation | *CNN, Computer Vision*

Nov 2025 – Present

- **Context:** tried adding an edge-aware refinement module to the disparity pipeline and comparing outputs to baseline
- **Action:** created an edge-aware refinement module for a disparity pipeline using CNN spatial residual feature extraction for disparity computation and residual refinement
- **Result:** achieved qualitatively sharper depth edges compared to baseline models

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## WORK EXPERIENCE

### AI Application Development Intern

*Bihu Technology*

Mar 2025 – Aug 2025

GuangZhou, China

- Built an LLM-driven platform to automate teaching-material conversion via a multi-stage prompt workflow
- Designed a LangChain-based RAG learning assistant and deployed it university-wide
- **Result:** Served 5,000+ students; reviewed system architecture and authored [A Survey of RAG](#)

### Data Quality Intern

*Yonyou Network Technology*

Apr 2023 – Jun 2023

Macau, China

- Validated 1M+ migrated ERP records in SQL; automated record batch generation with Python

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## SKILLS

**Language:** Chinese (native), English

**Frameworks:** PyTorch, Flask, FastAPI, SprinBoot

**VLA/RL/World Models:** OpenPI(Pi0/ Pi0.5), RT-1, RT-2, Diffusion Policy, OpenVLA; PPO, SAC; DINO\_WM

**Simulation:** MuJoCo, Gazebo, ROS2, Linux-Ubuntu

**Libraries:** Transformers, Numpy, Pandas, SciPy, OpenCV

**Programming:** Python, C/C++, Docker, Git, Java, SQL