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EDUCATIONAL BACKGROUND

The University of Hong Kong

Hong Kong, China

BASc (AppliedAI)

2023.09–Present

- CGPA: 3.65/4.3
- Relevant Coursework: Optimization (A+), Probability & Statistics (A+), Deep Learning (A).
- Honors: 2024–2025 Dean’s Honours List.

University of California, Berkeley

Berkeley, CA, US

Berkeley Global Access Program

2026.01–2026.08

- CGPA: 4.0/4.0
- Relevant Coursework: Advanced NLP, Bayesian Statistics, Numerical Analysis.

PUBLICATIONS

* Equal contribution; ‡ Project lead; † Equal advising. ... denotes omitted authors.

Agentic World Action Models

Zhuoyang Liu*, Dantong Niu[‡], Botong Zhang*, [Boning Shao](#)*, ..., Yuke Zhu[†], Guanzhi Wang[†], Linxi “Jim” Fan[†], Trevor Darrell[†].
ICLR, 2027. (Under review)

T-Rex: Tactile-Reactive Dexterous Manipulation

Dantong Niu*, Zhuoyang Liu*, Zekai Wang*, [Boning Shao](#), ..., Danfei Xu, Linxi “Jim” Fan, Trevor Darrell.
CoRL, 2026. [tactile-rex.github.io] [[arXiv:2606.17055](https://arxiv.org/abs/2606.17055)]

DexTacWAM: A Visuo-Tactile World-Action Model for Dexterous Manipulation

Haoran Yuan[‡], Zekai Wang, [Boning Shao](#), Haoran Lu, Trevor Darrell, Ismini Lourentzou[†], Wei Zhan[†].
arXiv preprint, 2026. [dextacwam.github.io] [[arXiv:2609.24976](https://arxiv.org/abs/2609.24976)]

Contrastive Action-Image Pre-training for Visuomotor Control (CAIP)

Yuvan Sharma*, Dantong Niu[‡], Anirudh Pai*, ..., [Boning Shao](#), ..., Jitendra Malik[†], Trevor Darrell[†], Roei Herzig[†].
arXiv preprint, 2026. [caip-encoder.github.io] [[arXiv:2606.17256](https://arxiv.org/abs/2606.17256)]

Periodic Bootstrap Thompson Sampling for Periodically Non-Stationary Bandit Problems

[Boning Shao](#).
DAI, 2025. [[arXiv:2607.16986](https://arxiv.org/abs/2607.16986)]

RESEARCH EXPERIENCE

AW-0: Agentic World Action Models

UC Berkeley

Undergraduate Researcher. Mentor: Trevor Darrell

2026.06–2026.09

- Selected, preprocessed, and cleaned **~2,000 hours of YAM robot data** and **~1,000 hours of egocentric human data**, converting both sources into standardized **LeRobot** datasets for pretraining.
- Optimized the **code-labeling pipeline** and deployed large-scale labeling across the pretraining dataset.
- Built **evaluation infrastructure** for **2 embodiments**; trained, deployed, and evaluated $\pi_{0.5}$, **EgoScale**, **DreamZero**, and **WLA** baselines on **8 real-world** and **50 RoboTwin 2.0** tasks.

T-Rex: Tactile-Reactive Dexterous Manipulation

UC Berkeley

Undergraduate Researcher. Mentor: Trevor Darrell

2026.02–2026.05

- Designed **downstream manipulation tasks** for tactile-reactive policies.
- Collected **~20 hours of midtraining data**, plus posttraining data for **6 downstream tasks**.
- Conducted **policy evaluations** on downstream manipulation tasks.

DataRank Platform Design

Fudan University

Undergraduate Researcher. Mentor: Yanghua Xiao

2025.06–2025.08

- Built PageRank-inspired dataset search for DataRank, combining **semantic retrieval** with **BM25**.
- Developed interfaces connecting the algorithm to the database and frontend.

Multi-armed Bandit Algorithms

Remote

Core member. Mentor: Osman Yagan, Carnegie Mellon University

2025.04–2025.07

- Implemented **Explore-Then-Commit**, **Upper Confidence Bound**, and **Thompson Sampling**, comparing their theoretical properties and performance across settings.
- Independently authored a paper on MAB enhancements, accepted for presentation at **DAI 2025**.

Model Benchmark Development and Evaluation

The University of Hong Kong

Undergraduate Researcher. Mentor: Kai Han

2025.02–2025.03

- Annotated bounding boxes, attributes, interrelationships, and context for **30 images**; scored model outputs for **100 image sets** and helped analyze **10 models**.

PROJECT EXPERIENCE

RAG-Based Market Insight System for Startups

The University of Hong Kong

Core Developer (Independent Module)

2025.04–2025.07

- Scraped Trustpilot reviews via **BeautifulSoup**; analyzed sentiment using **VADER** and star ratings.
- Built a **RAG** pipeline with **LangChain**, **ChromaDB**, and **Qwen-Turbo** to analyze reviews.
- Built a **Chainlit** UI to find market pain points and draft replies; tuned prompts to improve quality.

Patient Readmission Risk Prediction System Based on EHR

The University of Hong Kong

Core Developer

2025.04–2025.07

- Built temporal and **TF-IDF** features from 171 variables and notes (**11,041 patients**; ~82,000 EHRs).
- Tuned **XGBoost**, **LightGBM**, and **CatBoost** with **Optuna**, using stratified 5-fold cross-validation for model selection and class weights to address class imbalance.
- Built a **rank-averaging ensemble**: **0.8146 validation AUC** and **0.82 Kaggle test AUC**.

INTERNSHIP EXPERIENCE

Infinigence AI

Shanghai, China

Intern, Product Department

2024.07–2024.08

- Collected parameters, performance metrics, and pricing for **8 leading domestic and international AI models** (e.g., Qwen, Llama); contributed to a **10-page competitive analysis report**.
- Presented **Llama 3.1**'s technical report at a meeting, covering scaling laws and model training methods.

Moore Threads

Shanghai, China

Intern, HSIO Department

2024.06–2024.07

- Learned the overall framework and processes of hardware systems and chip manufacturing systems.
- Refined a **Python script** to **categorize data** extracted from Excel, adapting it to updated chip design requirements and improving usability for the R&D team.

LANGUAGES AND SKILLS

- **Languages:** Mandarin (native); English (TOEFL 108/120).
- **Programming:** Python, C++, R.
- **Robotics:** Policy training, deployment, and evaluation for manipulation with grippers and dexterous hands; evaluation infrastructure development; data cleaning and preprocessing.
- **Machine Learning:** Transformers, diffusion models, CNNs; RAG; XGBoost, Optuna.
- **Computer Graphics:** OpenGL, 3D Gaussian Splatting.