

Yilin Tang

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EDUCATION

Northeastern University

Master of Science in Computer Science

Sep. 2023 - Expected May. 2025

Seattle

Available for Internship: Fall Co-op Duration

- ML/AI | Data Mining | Computer Vision | Distributed System | Algorithms | HCI

Northeast Normal University

Bachelor of Engineering in Software Engineering

June 2021

China

- Operating System | Database | Networking | Compilers | Introduction to AI | Intro to Cryptography

WORK & PROJECT EXPERIENCE

AI Safety Research: Model Unlearning in Deep Learning [Code] [Colab Demo]

- Model unlearning is to remove specific subset of data from large models, cheaper and faster than retraining the model, to preserve privacy and compliance.
- Studied research and techniques of AI safety, **Adversarial Robustness, Red Teaming, Sparse auto-encoder**
- Formulated unlearning problem and criteria. Designed Unlearning methods and experiments on **CNN and Transformer** models.
- Analyzed Forgetting Quality and efficiency. Wrote formulation and experiments for paper.

Computer Vision: Real-Time Sys (OpenCV, C++, PyTorch)

Spring 2024

- Develop a framework of Pruning, fine-tune efficient **Vision Transformer** models (ViT) [Code]
- Chinese character **object recognition** system, with cleanup, segmentation, region-analysis pipelines.
- Created AR objects, Cartooned face video filter, real-time speed optimization by Parallel Processing.

Institute of Automation, Chinese Academy of Sciences

Oct. 2019 - Sep. 2021

Deep Learning Research Intern

Beijing

AI Risk Assessment Platform Backend (Collaborative)

- Implemented and optimized API that provides Adversarial Attack algorithms to analyze the risk of user trained models, to reduce computation and training time.

Distributed System: Paxos Key-Value System

2022

- Deployed Election Algorithm and Paxos logic to meet Consistency across multiple servers.
- Used RMI and Observer Design Pattern for Thread communication and Server-Client communication.
- Used data duplicate to meet fault-tolerance and Utilized multi-thread server and thread-safe.

PROFESSIONAL SKILLS

Languages: Java (Backend Development) | Python (Machine Learning) | C++/ C (Computer vision)

Frameworks & Tools: Linux | VScode | Git, CI/CD | JUnit, Pytest (testing) | Conda (virtual environment) | GPU | PyTorch | Tensorflow | scikit learn | Flask | OpenCV | Figma (Prototype design)

Soft Skills: Attention to Details | Troubleshooting | Work with Cross-function partner | Communicate technical information to non-technical people

PERSONAL INTERESTS

- Brain and Intelligence, Futuristic, Love, Death & Robots, Greek myths, Cthulhu