

# Evie Qiu

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## EDUCATION

Department of Automation, Tsinghua University, Beijing, China

Aug 2019 - Jul 2023(Expected)

➤ Major GPA: 3.82/4.0      Ranking: Top 10% in 160+ students

### ➤ Core Courses:

C++Program Design and Training / Computer Languages and Programming / Computer Principles and Applications / Signals and System Analysis / Big Data and Machine Intelligence / Foundation of Artificial Intelligence / Automatic Control Theory / Data Structures / Calculus / Linear Algebra

### ➤ Honors and Awards:

Person of the Year in Department of Automation(10 in 500+) 2021.12

SK Scholarship (Undergraduate student), for overall excellence (30/ 450) 2021.10

Excellent Youth League member, Tsinghua University (15/105) 2021.10

Weichai Scholarship, for academic excellence and excellent social work 2020.10

## PROJECT EXPERIENCES

**Fine-tuning for Worst-Case Generalization** | Tsinghua University | Research Assistant

Nov 2021-Present

Advisor: **Mingsheng Long**, Associate Professor, Machine Learning Group, School of Software, Tsinghua University

➤ To avoid learning models that rely on spurious correlations, suffering high loss on specific groups of data (i.e. worst-case data) in fine-tuning problems.

➤ Applied **Distributionally Robust Optimization** method by manually making the model focus more on **hard-case samples** to guarantee a good performance **on the possibly worst target distribution**.

➤ Intended to implement such method on CV and NLP downstream tasks to demonstrate the DRO-method's universality.

**Universal Domain Adaptation with Meta-learning** | Tsinghua University | Research Assistant

Aug 2021-Present

Advisor: **Mingsheng Long**, Associate Professor, Machine Learning Group, School of Software, Tsinghua University

➤ Aimed to eliminate the label category gap on source and target domains in Domain Adaptation tasks, called Universal DA by identifying outlier samples without the need for prior knowledge.

➤ Conducted experiments with torch and achieved improved performance on Office31, OfficeHome settings. (1~2% in accuracy, 8% in h-score) by utilizing **a meta-learning method**.

➤ Demonstrated that identifying outlier samples through distributional distance measurement is beneficial. Detecting outlier is not enough, intended to consider harder circumstances like **long-tail distribution** in real-world settings.

**Video Desnowing with Speed and Effectiveness** | Tsinghua University | High-tech Winter Olympics

July 2021-Aug 2021

Advisor: **Jianming Hu**, Associate Professor, Institute of systems engineering, Department of Automation

➤ Focused on problems encountered when applying current vehicle recognition algorithms to real-life circumstances **due to bad weather**. Researched on traditional (dark channel; etc.) as well as deep learning methods (DesnowNet; etc.), which cannot promise **speed** and **effectiveness** at the same time.

➤ Proposed method based on Cycle GAN to promise **better robustness** on unseen circumstances and **least-complexity** for real-world implementation in Olympics Park.

**Scenic spot guide based on Unitree Robotics A1** | Tsinghua University | Special Operations Team

July 2021

➤ Developed **4 functions** with ROS system including: automatic navigation, human tracking, voice interaction and emergency management.

➤ Integrated the system into a **voice-conduct comprehensive product** which could serve the purpose of a scenic spot guide.

**Thunder-Classroom Application Development** | Tsinghua University | Course Project

April 2020-June 2020

Advisor: **Jingtao Fan**, Associate Professor, Laboratory of Brain and Cognitive Sciences, Department of Automation

➤ Built an **online-meeting application** aimed to serve as an online-classroom which resembles RainClassroom.

➤ Realized functions with GUI interface include: screen sharing, voice sharing, question attributing, etc. by C++ programming. Successfully used its release version to **finish the project oral defense**.

## LEADERSHIP AND ACTIVITIES

### Student Union, Department of Automation | Vice Minister

Aug 2020-Aug 2021

- Served as **chief stage director** in Student Festival of Department of Automation. Lead a team of 40+ members, arranged 10+ programs, directed stage performances for an evening in the Great Hall (900 audience).
- In charge of Department singing contest & Dancing party involving other 4 departments.

### Association of Warmth & Love, Tsinghua University | Operation Center

Oct 2019-Oct 2020

- Organized a **novel** voluntary program for letter communication between undergraduates and junior students in ShanXi countryside, maintaining 100+ pairs of 1v1 links lasting for 2 semesters. Awarded as **Five-Star Volunteer Project**.

### Students Union, Department of Automation | P.E. Apartment, member

Oct 2019-Oct 2021

- Joined badminton team, competed in John Ma Cup competitions of female doubles and mixed-doubles and won championship for the Department of Automation.
- Joined karate team, competed in John Ma Cup competition and got top-8 awards in individual and team events.

## SKILLS

### Solid programming, coding and system analysis skills

- Programming Languages: C/C++, Matab, Python. Quick to learn new languages and APIs.

### Standard English Tests

- GRE: 332    Verbal -162    Quantitative -170    Analytical Writing - 4.0