

# JIALU GAO

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## EDUCATION

**TSINGHUA UNIVERSITY Computer Science and Technology**

Sep 2019 - Present

**GPA: 3.74/4.00**

- Computer Science Courses: Object-oriented Programming, Data Structure and Algorithm, Introduction to parallel programming, Operation System, Computer Architecture, Computer Network, Machine Learning.
- Math Courses: Calculus A, Advanced Linear Algebra, Discrete Mathematics, Probability and Statistics, Introduction to Bayesian Statistics, Statistical Computing and Software.

## PUBLICATION

- Liu Y , **Gao J** , Wu F , et al. The Origin of CBRAM With High Linearity, On/Off Ratio, and State Number for Neuromorphic Computing[J]. IEEE Transactions on Electron Devices, 2021, PP(99):1-4.
- Dhruva Bansal, ... , **Jialu Gao**, et al. A Dual Representation Framework for Robot Learning with Human Guidance, 6th Annual Conference on Robot Learning (CoRL 2022)

## LANGUAGE SKILLS

**English – high proficiency**

- TOFEL 113 (R28 L30 S28 W27) GRE V162+Q170+W3.5
- CET-4 689/710, CET-SET4 A

## ACADEMIC EXPERIENCES

**Human in the loop RL** *Stanford SVL*

May 2022 – Oct 2022

- Under the guidance of Jiajun Wu and Feifei Li, design a dual representation framework for robot learning under human guidance including preference learning and evaluative feedback.
- The paper “*A Dual Representation Framework for Robot Learning with Human Guidance*” is accepted at CoRL 2022.

**Multitasking Learning using Imitation Learning** *Stanford CogAI*

Nov 2021 – present

- Under the guidance of Huazhe Xu and Ruohan Zhang, explore the modularity in multi-task learning algorithms.
- Come up with a new concurrent multi-task learning setting, with handcrafted environment and innovative algorithm solutions.

**MCM-ICM The Interdisciplinary Contest in Modeling**

Dec 2020 - Jan 2021

- Design a system that effectively extracts relationships of famous musicians and genres, model their changes over time and how they interact with each other.
- Received Honorable Mention prize, top 18% of all teams.

**AI algorithms based on artificial synapse** *Student Research Training*

Mar 2020 -June 2021

- Construct and maintain the neural network simulation pipeline written in C/C++, which uses CBRAM model as neurons to build a 2-layer MLP model.
- The paper “*The Origin of High Linearity, On/Off Ratio and State Number of CBRAM for Neuromorphic Computing*” is published at IEEE-TED 2021.

## INTERNSHIP

**Bing Ads, Software engineer (Algorithm) | Microsoft Explore intern**

July 2021 - September 2021

- Ad-creative generation: build a **landing-page to headline** sequence to sequence Ad-generation network using BART and CVAE. Maintained 96% overall high quality and improved the diversity of generated Ads by 12% of m-bleu score.
- Strongly recommended by mentor and manager and received a return offer next summer.

## PROJECTS

- MIT Online Learning Program: Build a Domain Transfer network based on CycleGAN in python, which can show the aging process of a young person given a picture of his/hers.
- GRE vocabulary learner using Qt: A self-designed app that runs on Mac that aids students to memorize GRE vocabulary better.
- Android News App: A news app that supports browsing, keyword searching, and history record.
- Pipeline CPU: A pipeline CPU that runs 29 standard RISC-V instructions, with dynamic branch prediction, cache and VGA.

## EXTRACURRICULAR ACTIVITIES

- **Female Speaker at Women Think Next 2021, Microsoft**
- **Student Association for Science and Technology** Organize and produce articles for the SAST WeChat official press.
- **IOS Club of Tsinghua University** Vice President of Software engineering department.
- **KouMing Communication Platform, co-founder** A nonprofit organization that aims to provide high school students with learning tips, time-management, career choices, and one-on-one instruction, which gained over 10,000 subscribers in one month.
- **Rubik’s Cube Club of Tsinghua High School, President** Founded the first club of Rubik’s cube in Tsinghua High School. Entered the 2016 Asian Championship and was the top 20 female speed-cubers with the official personal best of 13.68s

## PROGRAMMING SKILLS

C/C++, Qt, Python, Java(Android), R, Rust, Matlab, Markdown, LaTeX