

# 陆言 Robin Lu

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Shanghai, China



## EDUCATION

<b>Second High School Affiliated to East China Normal University (Zizhu Campus)</b>	Sep 2016 - Jun 2019
High School	
National Olympiad In Informatics in Province (NOIP) 2018 Shanghai Division: 1st Prize	
<b>Tongji University</b>	Sep 2019 - Jun 2023
Communication Engineering 本科 School of Electronic and Information Engineering	Shanghai
CCF CSP (Certified Software Professional): TOP 0.69%	

## PROFESSIONAL EXPERIENCE

<b>FRC Team6940 of Second High School Affiliated to East China Normal University (Zizhu Campus)</b>	Jan 2017 - May 2017
Member Vision Group	Shanghai
I used LabVIEW and NI RoboRIO to control the Mecanum drive of the robot and experimented with PID control.	
<b>School of Electronic and Information Engineering, Tongji University</b>	Jan 2021 - Present
Member Lab of Digital Imaging	Shanghai
I have been working on emotion recognition and working memory-related research based on EEG(electroencephalogram) and fMRI(functional magnetic resonance imaging) data with tools from information theory and complex network theory.	
<b>Institute for AI Industry Research, Tsinghua University</b>	Jan 2022 - Feb 2022
Internship ARX	Beijing
I worked on simulating the robotic arm with NVIDIA Isaac Gym and doing reinforcement learning experiments in simulation environments. What's more, I've participated in the C++ and ROS-related development of robotic arm control with visual feedback.	
<b>Team Superpower, Tongji University</b>	Oct 2021 - Present
Member, Vice-Group Leader Vision&Intelligence Group	Shanghai
As a member, I was engaged in the maintenance of ROS and the traditional machine vision solution of the team. As a vice-group leader, I designed and advocated Gazebo and OpenAI simulation and Multi-Agent Reinforcement Learning based autonomous robot technical roadmap, as well as a deep learning-based vision solution	
<b>Institute of Software, China Academy of Science</b>	Jul 2022 - Present
Senior Internship PLCT Lab	Beijing, China
As a high level senior internship, I has a broad scope of work, including testing and maintaining of RISC-V port of Linux distribution (mainly OpenAnolis), performance tuning on t-head Wujian 600 Platform (4*C910 high-performance RISC-V core), Japanese Localization and Computer Architecture research.	

## LEADERSHIP EXPERIENCE

<b>Tongji Open Source Association, Tongji University</b>	Sep 2020 - Present
Accounting & Convenor	Shanghai
I have been participating in the organization of tech sharings and led the Team Tongji of ASC Student Supercomputer Challenge 20-21 in 2021.	

## SKILLS, CERTIFICATIONS & OTHERS

- **Skills:** Brain Signal Processing, Edge Inference of Deep Learning Model, Programming
- **Languages:** English (IELTS 7.0, TOEFL 96), Japanese (expected to achieve JLPT N2 in Dec 2022)

### Informal Technical Essays

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## Technical Essays on Computer Architecture

- A Glimpse at LoongMMI (Chinese) <https://zhuanlan.zhihu.com/p/502138330>
- Certain Many-Core and its programming models (Chinese) <https://zhuanlan.zhihu.com/p/516491812>
- A revisit to Loongson 3B1500 (Chinese) <https://zhuanlan.zhihu.com/p/516591678>
- Stories of "Independent and Controllable Industrial Chain": Architectures and Solutions of Chinese Homemade CPU (Chinese, Technical Report in PLCT Lab) <https://docs.google.com/presentation/d/1HPJJEEeMVc7QAP-7SQ-ZRVJzrfQvqe4SX27BrSKYfFZI>
- Apple Loves Machine Learning: a bottom-up analysis (English, Technical Report in Tongji Apple Club) <https://docs.google.com/presentation/d/1Byi6TN0xNnlwdC-JyDQQLBXge8KkgCEMrmgbcFiXMs>

## Technical Essays on Computational Neuroscience

- Casual Modelling on Acoustic Perception based on Music & EEG: Research Plan(English, Current Research Plan in Tongji) <https://zhuanlan.zhihu.com/p/516592414>
- Network Analysis of Drosophila's Medulla dataset (Chinese, Presentation of Course "Introduction to Network Science") <https://zhuanlan.zhihu.com/p/510959475>
- Notes on NMED-H & NMED-T (Chinese, Presentation in lab) <https://zhuanlan.zhihu.com/p/498406337>

## Technical Essays on Deep Reinforcement Learning & Robotics

- Initial Plan on Tongji's RoboMaster Automated Robot (Chinese) <https://zhuanlan.zhihu.com/p/450588473>
- Some Experience on Isaac Gym (Chinese) <https://zhuanlan.zhihu.com/p/467287316>

## Academic Writing

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### Papers on Computational Neuroscience

- Lu et al.(2022) Research advance of Caenorhabditis elegans neural system's property based on Complex Network. Chinese Journal of Medical Physics, (Accepted, in press).
- XIE Fei,GONG Xiaoliang,LU Yan,et al.Application of default mode network in the diagnosis of mental disorders: a review[J].Chinese Journal of Medical Physics,2022,39(6):695-700.[doi:DOI:10.3969/j.issn.1005-202X.2022.06.007]
- Paper on Lyapunov Series, Permutation Entropy and Alzheimer's Disease diagnostic, second author, manuscript in review