**PEIYANG GUO 郭培扬 (Preferred: Brian)**

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**GitHub:** <https://github.com/ETwilight>

**LinkedIn:** <https://www.linkedin.com/in/peiyang-guo-8bb84a252>

**EDUCATION**

**University of Illinois Urbana-Champaign** (Sophomore) **Expected Graduation: May 2026**

*Major in Mathematics & Computer Science*  GPA: 3.98/4.00, LAS Deans List, LAS James Scholar

*Minor in Electrical & Computer Engineering*

MATH 416H Abstract Linear Algebra (Honor Section) A+H (H means Honor)

CS 374 Introduction to Algorithms & Models of Computation A

ECE 110 Introduction to Electronics A+

PHYS 211 University Physics: Mechanics A+

CS 225 Data Structure AH

CS 233 Computer Architecture (MIPS, Verilog) A

**Shanghai World Foreign Language Academy** **Graduation: May 2022**

*International Baccalaureate Diploma Programme* GPA: 42/45

Math HL 7/7 and Rank 1st in School

Music SL 7/7 and Rank 1st in School

CS EE A

**RESEARCH EXPERIENCES**

* Research in [SJTU (Shanghai Jiaotong University) Apex Lab](https://apex.sjtu.edu.cn/) on Quadrupled Robotics

*May 2023 – Present*

Working with [Associate Prof. (Tenured) Weinan Zhang](http://wnzhang.net/) & [Ph.D. Hang Lai](https://apex.sjtu.edu.cn/members/laihang@apexlab.org), worked on distillation (boost) of iterations to allow step-by-step autonomous learning process of quadrupled robot motion on complex terrains, still working

* Self-Research about *Energy-Based Reinforcement Learning* *May 2020 – October 2021*

Instructed by [Associate Prof. (Tenured) Weinan Zhang](http://wnzhang.net/), A Novel Method of Reinforcement Learning Exploration process to handle Sparse-reward Environments

<https://github.com/ETwilight/Research/blob/master/EBEX/Energy%20Based%20Exploration%20in%20Reinforcement%20Learning%20-%20Brian%20Guo.pdf>

* Research in SJTU lab: *A New Benchmark for 2D-3D Object Discovery from Videos November 2020*

Worked with [Prof. Cewu Lu](https://www.mvig.org/) & [Tenure-Track Assistant Prof. Yonglu Li](https://dirtyharrylyl.github.io/)

**AWARDS & DISTINCTIONS**

* 2020 Yau-Science Award for Computer Science **National Second Prize** *October 2020*
* 2020 High School Mathematical Contest in Modelling (HIMCM) **Honorable Mention** *November 2020*
* The International Mathematical Modelling Challenge 2020 **Meritorious** *January 2020*

**INTERNSHIP**

* Software Engineer at Infotmic CO LTD ([www.infotm.com](http://www.infotm.com/)) *July 2023 - August 2023*

Studying & working on Linux Kernel & Linux Driver Developing and MATLAB Computer-Vision Algorithms

**SKILLS & PROGRAMMING LANGUAGES & RESEARCH/PERSONAL INTERESTS**

* **Skills:** Machine Learning (Proficient), especially in (Deep) Reinforcement Learning & Exploration

Software & Web Developing (Proficient), Android (Java, XML, C) & HTML5/CSS/JS/TS/Vue

* **Research Interests:** Machine Learning & Deep Learning in any field, especially in:

Theory-side (such as Interpretability, Trust-worthy Machine Learning),

(Multi-agent / Deep / Traditional) Reinforcement Learning / Robotics,

Natural Language Processing

(I have sufficient experience in PyTorch, NumPy, etc.)

* **Programming Languages**: C++, C, Python, Java, gnu-x86: (Proficient), Rust: (Intermediate)
* **Personal Interests**: System Programming | Pure Mathematics (Analysis, Probability Theory)

**LEADERSHIP AND INVOLVEMENT**

**UIUC GITHUBER Urbana-Champaign, ILLINOIS**

*Co-leader September 2022 – Present*

* Collaborate and co-lead the MechMania-28 Game AI 24h Hackathon for MM28 Competition, 2nd place

<https://github.com/UIUC-Githuber/MM28>

* Participate in HackIllinois hackathon event, developed an AI video converter that convert video style

<https://github.com/CharlieDreemur/AI-Video-Converter>

**CS128 Honors Project Urbana-Champaign, ILLINOIS**

*Co-leader December 2022*

* Collaborate in project RustKill, a local area network server for Werewolf Game, Focus in Backend

<https://github.com/ETwilight/Rust-project>

**LOCRL (Programming & Modding Society) CHINA**

*Founder, President December 2015 – Present*

* Powerband, AI Music Generator [still working, I am the main contributor, Personal Interest]
* WebIDE, Android Application for Web Developing

**Computerization Club Shanghai, CHINA**

*Leader, AI Department Chief July 2020 – July 2021*

* Leader, Enspire Website for School Student Managing, Expand the club members by 300%
* AI Department Founder + Chief, Prototype for Eldiutor, an elderly companion chatbot

**WMC Mathematics Club Shanghai, CHINA**

*Vice President July 2020 – July 2021*

* Mathematics Modelling Department in World Foreign Language Academy

**UNRESTRAINED CONCERT Shanghai, CHINA**

*Founder, Piano Player, Coordinator*  *June 2021 – Present*

* The First Formal Classical Concert Festival in WFLA, have held the third concert this August
* Lead Activity, Pick Location, Negotiate Rental Price, Accompanying and Ensemble, Publishing Host

**ELECTRIC LINK OF THE RESUME**

* <https://github.com/ETwilight/RESUME/blob/main/Resume%20Peiyang%20Guo.pdf>
* Available for download for viewing all the hyperlinks