

EDUCATION

- **Columbia University**, B.A. Mathematics (Intended) *New York, NY. 2020 - 2024*
- **Columbia Preparatory School**, Class of 2020 Valedictorian *New York, NY. 2016 - 2020*
 - **Selected Activities:** Editor-in-Chief of Newspaper, President of CS club, After-school AI Instructor

EXPERIENCE

- **Research Engineering Intern at Medipixel** *Seoul, Korea. May 2020 - Aug 2020*
 - Implemented distributed reinforcement learning (RL) architecture *Ape-X* to company open source library
 - Designed and implemented Markov Decision Processes for 3D-2D medical image registration with RL solution
- **Summer Research Fellow at Stony Brook University** *Stony Brook, NY. June 2019 - Aug 2019*
 - Studied and implemented a distributed version of the *Soft Actor Critic* algorithm under the supervision of Ji Liu Group at Stony Brook University ECE Department
 - Research was supported by the Simons Summer Research Program, the Simons Foundation, and Stony Brook University
- **Technical Writer at Towards Data Science** *Remote. Feb 2019 - March 2020*
 - Reviewed and explained reinforcement learning algorithms for Medium publication *Towards Data Science*; 300K+ total views [towardsdatascience.com/@thechrisyoon]
- **Chief Executive Officer at We Love Coding** *New York, NY. March 2018 - March 2020*
 - Led a non-profit organization for coding education based in New York City; Taught 150+ students from underrepresented communities with internally developed CS curriculum [welovecoding.org]
- **Independent Research** *New York, NY. May 2018 - March 2019*
 - Implemented mathematical model-based cancer chemotherapy treatment simulation and developed RL-based solution
 - Won second prize in *2019 New York City Science and Engineering Fair - Computational Science Category*

SELECTED PROJECTS

- **RLcycle: [Github Link. 120+ Stars, 40+ Forks]**
 - A library for ready-made reinforcement learning agents and reusable components
 - Implementations include: DQN + Enhancements, Distirbutional DQN (C51, QR, Rainbow), A2C, A3C, DDPG, TD3, SAC
 - Frameworks used: PyTorch, Ray, Hydra
- **distributedRL: [Github Link. 60+ Stars]**
 - Configurable implementation of *Ape-X* for easily distributing off-policy RL algorithms
 - Frameworks used: PyTorch, Ray, ZeroMQ

COURSEWORK (COLUMBIA UNIVERSITY)

- **2019-2020 (high school dual enrollment):** Honors Math A (UN1207; proof-based calculus), Honors Math B (UN1208; proof-based linear algebra and multivariable calculus)

SKILLS

- **Technologies:** Python, PyTorch, Ray, ZeroMQ, C, L^AT_EX, Git
- **Miscellaneous:** Technical Writing, English (native bilingual), Korean (native bilingual)

REFERENCES

- Dr. Ji Liu (ji.liu@stonybrook.edu), Stony Brook University ECE Department