Christopher Jaehyun Yoon

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EDUCATION

Columbia University, B.A. Mathematics *New York, NY. 2020 - 2024*
Columbia Preparatory School, Class of 2020 Valedictorian *New York, NY. 2016 - 2020*
- **Selected Activities**: Editor-in-Chief of School 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 to company open source library.
- Designed and implemented Markov Decision Processes for 3D-2D medical image registration with associated 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 with the Ji Liu Group at Stony Brook University ECE Department through the Simons Summer Research Program.
- Completed poster presentation and paper submission.
- Research was supported by the Simons Foundation and Stony Brook University.

Technical Writer at *Towards Data Science* *Remote. Jan 2019 - March 2020*
- Wrote articles explaining key developments in AI and RL for Medium publication *Towards Data Science*.
- 9 posts, 500+ daily views, 260K+ 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. [welovecoding.org].
- Taught 150+ students from underrepresented communities with internally developed CS curriculum.

Independent Research *New York, NY. May 2018 - March 2019*
- Implemented mathematical model-based cancer chemotherapy treatment simulation and developed RL-based solution with 90%+ success rate.
- Completed poster presentation and paper submission.
- Won second prize in *2019 New York City Science and Engineering Fair - Computational Science Category*.

SELECTED PROJECTS

- **RLcycle:** [Github Link; 140+ Stars, 40+ Forks]
  - A library for ready-made reinforcement learning agents and reusable components
  - Implementations include: DQN, Distributional 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

RELEVANT 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, Vue.js, LaTeX, Git, Linux
- **Miscellaneous:** Technical Writing, English (native bilingual), Korean (native bilingual)

REFERENCES

- Dr. Ji Liu (ji.liu@stonybrook.edu), Stony Brook University ECE Department
- Danielle Detering (ddetering@google.com), Google ML Solutions Engineering Team