Christopher Yoon

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Education

Columbia University New York, NY

B.A in Computer Science, Concentration in Mathematics (GPA: 3.89) Sep 2020 – May 2024

Selected Coursework: († indicates expected coursework for Fall 2022)

Graduate Operating Systems†	Representation Theory†	Distributed Systems†	Compilers†	Operating Systems
Parallel Functional Programming	Database Systems	Artificial Intelligence	Real Analysis I	Abstract Algebra I&II

Experience

Riot Games (Remote) LA, CA

Software Engineer Intern, Live Operations Engineering - Incident Management Team May 2022 - Present

- Built a config management system for monitoring alerts and incidents in live game services. (Python)
- Built a CI/CD pipeline to automate deploying new alert configs and executing system rollbacks. (Docker, Jenkins)

Columbia University Dept. of Computer Science New York, NY

Undergraduate Teaching Assistant Jan 2022 – Present

- Selected as TA for: Artificial Intelligence (Masters-level), Fundamentals of Computer Systems (Undergrad-level)
- Organized and ran recitations on writing clean Python code for AI development for 300+ students
- Ran weekly office hours to help peers learn assembly code, applied probability, reinforcement/supervised learning

Undergraduate Deep Learning Researcher Aug 2021 – Present

- Surveyed and reproduced algorithms for data valuation (how to enumerate the worth of a data point)
- Building a distributed data valuation system for large scale ML training, advised by Prof. Junfeng Yang

Faikerz (Remote) Seoul, Korea

Software Engineer May 2021 – Nov 2021

- Rewrote core image processing engine to incorporate feature embeddings, improving retrieval runtime by 60%
- With the improvements above, built clustering engine for brand-specific counterfeit listings on E-commerce sites

Medipixel Seoul, Korea

Machine Learning Engineering Intern May 2020 – Aug 2020

- Built distributed training framework for company's open-source ML library, accelerating ML in compute clusters
- Designed and implemented simulator and reinforcement learning solution for 3D medical image alignment
- Ran company-wide seminar on designing and implementing distributed/large-scale ML training infrastructures

Skills

Languages: Python, Haskell, TypeScript, Elixir, C, Go

Technologies: PyTorch, Tensorflow, SQL, Postgres, Flask, React, Linux, Docker, Jenkins

Selected Projects

codetgt.io **[Go, Typescript, React]**: Web-based Real-Time Collaborative Code Editor **[Github]**

- Built a real-time collaborative code editor that also supports text and voice chat between users (Work in Progress).
- Wrote a edit synchronization library and back-end server in Go, with the web front-end in Typescript/React

Linux Kernel Hacking **[C, Linux]**: Projects from Operating Systems Coursework

- Built a **concurrent key-value store**, **process scheduler**, **file system** inside the Linux kernel with 2 teammates
- Built a **highly-concurrent static web server**, and **linux system-calls for memory management**
- Extensively built on, modified, and studied the Linux kernel (v5.10) source code

RLcycle **[Python, PyTorch, ZeroMQ]**: Distributed Reinforcement Learning Agents Framework **[Github ★: 240+]**

- Implemented 12 key RL algorithms and rigorously tested on Atari games (masters Atari Pong in under 12 minutes).
- Incorporated parallel and distributed (Ape-X) learning architecture, using Ray-distributed and ZeroMQ