Christopher Yoon

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EDUCATION

Columbia University   New York, NY

B.A. Computer Science, Minor in Mathematics (GPA: 3.92)   Sep 2020 – May 2024

Select Coursework: Graduate Operating Systems, Graduate Compilers, eBPF Seminar, Abstract Algebra
Teaching Assistantship: Artificial Intelligence, Parallel Functional Programming, Fundamentals of Computer Systems

EXPERIENCE

Palantir Technologies   New York, NY

Software Engineer Intern, Gotham Data Modeling Team   Sep 2023 - Dec 2023

- Backend engineering for Palantir Gotham (U.S. Government) and Foundry (commercial) data ontology services
- Built API services for the interoperability and distributed synchronization of Gotham and Foundry data entities
- Related technologies: Java, API Engineering, Distributed Systems

Virtu Financial   New York, NY

Software Engineer Intern   Jun 2023 - Aug 2023

- Implemented TLS protocol for nonblocking TCP streams with low-level Java interfaces in core trading infrastructure
- Migrated stunnel-based TLS support in real-time trade ingestion systems to use custom TLS implementation
- Implemented proprietary authentication & authorization mechanism into company's post-trade data services
- Related Technologies: Java standard libraries (concurrency, NIO, security, networking), Spring, DGS (GraphQL)

Riot Games   (Remote)   Los Angeles, CA

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

- Built a GitOps config manager to improve cross-team collaboration on operating Riot's service monitoring systems
- Built a CI/CD pipeline to deploy new configs to monitoring systems and execute backups and rollbacks at crash
- Related Technologies: Python for GitOps infrastructure and API Client; Docker and Jenkins for CI/CD pipelines

Columbia University Department of Computer Science   New York, NY

Compilers Researcher   Sep 2022 – Present

- Building the *sslang* compiler, a language implementing the Sparse Synchronous Model for deterministic concurrency
- Implemented a session-typed lambda calculus interpreter to explore statically verified concurrent programs
- Related Technologies: Haskell, OCaml, Nix

Operating Systems Researcher   Sep 2022 – May 2023

- Contributed to building a secure containerization system that protects container memory against untrusted host OS
- Wrote kernel interfaces to a hypervisor-like container monitor for container lifetime and memory management
- Related Technologies: Linux Kernel Engineering, ARMv9 Linux, Assembly, Micro-OS, Hypervisors (KVM)

SKILLS

Skills: Linux Kernel Engineering, Hypervisors, Compiler Development, Machine Learning Systems, Backend Engineering
Programming Languages: C, Python, Haskell, OCaml, Java, Rust, Go, C++, RISC Assembly
Technologies: PyTorch, Tensorflow, Databases (SQL, Oracle JDBC, Postgres), Redis, Spring, Docker, Nix, Neovim

PROJECTS

Encrypted-TAO, built with Rust and Postgres   **[GitHub]**

· Implemented Facebook's social network serving model, but on fully encrypted graph data to preserve user privacy
· Implemented homomorphic encryption, query parsing and translation, and backend service with Rust

RLCycle, built with Python, PyTorch, Ray, ZeroMQ   **[GitHub]**

· Modular implementations of Deep Reinforcement Learning algorithms, garnered over **280 GitHub Stars**