RICHARD ZHU

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EXPERIENCE

Citadel   Aug. 2023 – Present
Software Engineer   *New York, NY*
- Enabled quant research volume to scale by 25x, by building a GKE-native job compute platform with cluster autoscaling, Dockerized code deployments, and 4x lower cost per job
- Productionized an analyst performance evaluation pipeline, improving runtime by 20x, and exposing an API consumed downstream in 60B+ USD of capital allocation and the analyst promotion process
- Spearheaded migration of 15000+ research jobs to run on cloud compute, driving rollout as an embedded developer within QR teams across the equities businesses
- Moved 70+ TB of research caches to GCS, by integrating cloud-native I/O into storage tooling
- Improved load/save times by 9x for custom researcher data structures with parallel serialization
- Reduced risk model generation runtime by 15%, by parallelizing cache logic in compute frameworks
- Expanded research capabilities for 200+ researchers and engineers, by building in-platform support for ML modeling, GPU compute, and AI coding on GKE-native dev machines

Ramp   Sept. 2022 – Dec. 2022
Software Engineering Intern   *New York, NY*
- Launched spend program, spend limit, and accounting functionalities on the Ramp developer API
- Improved data security for 100+ businesses, by encrypting OAuth secrets and robustifying queries

Citadel   Jun. 2022 – Aug. 2022
Software Engineering Intern   *New York, NY*
- Built an optimizer for tradeable factor portfolio construction, applied in 5B+ USD hedging strategies
- Reduced trading engine execution backtest runtimes by 75%, by parallelizing on GCP compute

Nuro   Feb. 2022 – May 2022
Software Engineering Intern   *Mountain View, CA*
- Provided 2x improved fidelity into teleoperational health via an overhaul of health status reporting
- Developed proxy for 3000+ daily pub/sub messages between robots and teleoperation consoles

Databricks   May 2021 – Aug. 2021
Software Engineering Intern   *San Francisco, CA*
- Deployed internal app to visualize and manage benchmarks for detecting performance regressions
- Increased throughput by 150% in load tests on internal microservices, by parallelizing requests

University of California, Berkeley   Jan. 2021 – Dec. 2021
Teaching Asssistant   *Berkeley, CA*
- Led labs, discussions, and office hours of 50+ students for CS 170 (Algorithms), CS 61A (Intro CS)
- Managed 2 academic interns, providing pedagogy mentorship and instruction in tutoring sections

EDUCATION

University of California, Berkeley   Aug. 2019 – May 2023
B.A. Computer Science   GPA 3.9
Awards: Neo Scholar, Upsilon Pi Epsilon, BlackRock Prize (CalHacks)

SKILLS

Languages: Python, Java, Go, C++, C, Scala, JavaScript, TypeScript, SQL
Tools: Kubernetes, Docker, AWS, GCP, GraphQL, Terraform, Bazel, Git, Pandas, PyArrow, PostgreSQL, SQLAlchemy, Spark