Ryan Ziegler

ryanjz2@illinois.edu | (614) 601-2157

Education

University of Illinois at Urbana-Champaign *2021 — Present*
- Pursuing dual BS/MCS in Computer Science with expected graduation May 2025 (BS Dec. 2023), 3.98/4.0 GPA
- Recipient of 2022 John R. Pasta award given to two outstanding Juniors in Computer Science
- Relevant coursework (by May 2024): Systems Programming, Computer Security, Computational Geometry, Algorithms for Big Data, Algorithmic Game Theory, Algorithms, Probability Theory, Numerical Methods

Experience

Software Engineering Intern, Databricks *May 2023 — August 2023*
- Developed server-side recently-viewed file tracking throughout Databricks product, and delivered and deployed project over 6 weeks ahead of schedule
- Mitigated multiple customer-facing production outages across multiple Databricks products
- Developed custom lint tooling to eliminate a major class of outages within Databricks
- Created a common framework for providing context to large language model-powered user experiences
- Built an in-memory implementation of Databricks Search to decrease CI/CD time and cost
- Designed and developed full-stack features to enable rollout of the new Databricks user interface

Software Engineering Intern, Apple *May 2022 — August 2022*
- Tuned Kubernetes and NGINX performance to decrease upload times by over 400ms (about 30%) for large ML assets
- Developed Apache Solr metadata service to decrease time to process searches and legal opt-out requests by over 120x
- Developed new Python SDK with improved documentation for Apple's ML asset management platform, decreasing developer onboarding time from days to hours and increasing adoption within Apple
- Built data model visualization tool for React-based web interface, decreasing nondeveloper onboarding time

Software Engineering Intern, Apple *May 2021 — August 2021*
- Developed first ever user interface (React, approx 14k LOC) from scratch for Apple's ML asset management platform
- Released interface 2 weeks ahead of schedule while incorporating extra feature requests from key stakeholders
- Decreased duration of frequent tasks from over 60 minutes of programming to less than 5 minutes of UI interaction

Teaching

CS374 (Algorithms) Course Assistant, University of Illinois Urbana-Champaign *January 2023 — Present*
- Hosted weekly office hours to answer questions about course concepts and homework assignments
- Organized and developed practice problems for exam review sessions

CS222 (Software Design) Lead Course Assistant, University of Illinois at Urbana-Champaign *January 2022 — Present*
- Designed majority of assignments and curriculum for Illinois' core software engineering course
- Responsible for selecting and managing hiring of 100 course staff

Projects

ModelRocket
- Architected a scalable, self-service ML model deployment platform using Flask, Redis, and React
- Developed realtime metrics service for monitoring and autoscaling
- Developed custom ML model load balancer with shuffle sharding for high availability and throughput
- Designed and developed user interface for ML model and API key management

Skills

Languages: C++, C, Python, Scala, JavaScript, TypeScript, HTML, CSS, SQL

Libraries & Tools: Boost, Django, React, React Native, Styled Components, React Testing Library, Git, PostgreSQL, MongoDB, Terraform, Linux, Kubernetes, WebSockets, WebRTC, GraphQL, ONNX, LangChain, Large Language Models