Jacob C. Kerr

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EDUCATION:

M.Eng., Computer Science, Cornell University College of Engineering (August 2023 – May 2024)
- Specialization in distributed systems, cloud computing, systems programming, and software engineering

B.S., Computer Science, Cornell University College of Engineering (August 2020 – December 2023)
- Minor in Operations Research and Information Engineering

RELEVANT EXPERIENCE:

Software Engineering Intern at Addepar (May 2023 - August 2023)
- Created 2FA requirement exemption in both front-end and back-end capacities through developing a database migration, building new endpoints to the back-end server, and adding buttons in the front-end to facilitate user access.
- Worked with Java, Ember.js, Quarkus, Jersey, JOOQ, Flyway, LaunchDarkly

Software Engineering Intern at Lockheed Martin (June 2022 - December 2022)
- Held a secret level U.S. security clearance
- Worked in test automation developing scripts for ensuring software met customer requirements
- Used Python and EyeAutomate
- Worked part time during the fall school semester

Software Engineering Intern at TheTake (Summer 2021)
- Created automated integration tests to benchmark text search algorithm used in internal company tools
- Created scripts to collect data on production databases and reported results to engineering team
- Proposed various improvements to the text search algorithm implemented in Python

PROGRAMMING PROJECTS OF NOTE:

Cornell Meetup (2022)
- Designed and created location-based social networking and messaging cloud-based web application hosted on Azure services as part of CS 5412
- Created microservice architecture using Azure Functions, Azure CosmosDB, and Apache Kafka

Database Management System (2022)
- Created an SQL-based database management system from scratch in Java as part of CS 4321
- Implemented join operations, sort operations, logical and physical query plan building, query optimizations

egos (2022)
- Created multithreading package, multi-level scheduler, cache block device, and FAT filesystem in C for an operating system as part of CS 4411

GachaPy (2021)
- Created backend engine for developing “gacha” genre games in Python and published to PyPi
- Hosted full documentation online using the ReadTheDocs service with automatic updates

RELEVANT COURSES:

Software Testing, Principles of Distributed Computing, Cloud Computing, Introduction to Algorithms, Introduction to Artificial Intelligence, Operating Systems, Operating Systems Practicum, Databases, Databases Practicum, Data Structures and Functional Programming, Computer Systems Programming, Honors Object Oriented Design and Data Structures, Discrete Structures, Unix Tools and Scripting, Digital Logic and Computer Organization

TECHNICAL & SOFT SKILLS:

- Java, Python, C, C++, SQL, Bash, OCaml, JavaScript/TypeScript
- Git, GitHub, GitLab, Docker, AWS, Azure, CLI, Linux/Unix, GitHub Workflows, Jenkins
- Comfortable speaking in front of crowds, work well in groups and collaborative projects