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## Skills

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**Programming Languages:** Python, R, Java, MySQL, bash, HTML/CSS, JavaScript

**Data Systems & Management:** pandas, Spark, Cassandra, Docker, HDFS, Kafka

**Technical Skills:** Source and Version Control (Git/Github), Project Management (Jira), Jupyter, Google Cloud Platform (VM instances, API applications), Custom Environments (conda), Spreadsheets (Excel)

## Projects

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**Project Sample: Key/Value Storage Service** – Python, gRPC, Docker, OOP

**Overview:** Server/client storage service which stores randomly generated key/value (string, int) pairs in a dictionary via RPC calls from a simulated client to the designed server, deployed with Docker

- Server inherits NumStore service containing two RPCs SetNum and Fact, which updates a key/value pair and computes the factorial of the value associated with the passed in key argument, respectively
- Increased efficiency by use of a LRU cache structure (size = 10) which keeps recent slow computations so they don't recompute if passed in again
- Implemented threading and locking to maximize efficiency of the client's communication with the server and the server's computing resources when request is received

## Work Experience

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**Research Computing Facilitator Assistant** *CHTC, UW-Madison* Spring 2022 - Present  
(CHTC – Center for High Throughput Computing at UW-Madison – <https://chtc.cs.wisc.edu/>)

- Closely collaborate with lead facilitator Christina Koch on tasks that manage CHTC's functionality in relation to user interactions, intra-center data flow, and integrating new processes into existing ones
- Re-structure defunct, unorganized, and inefficient processes by implementing automating scripts, consolidating data sources, and standardizing all data handled by facilitation team
- Test CHTC's HTC/HPC software *HTCondor* for processing bugs when handling GPU jobs and workloads
- Develop Python scripts that automate the movement of data from a variety of HTCondor usage outputs to a methodically organized repository that can be accessed for further analysis on trends
- Co-manage facilitation team Github repositories housing scripts, reports, raw and processed data, and more
- Generate periodical reports by transforming raw data into presentable reports that relay usage trends broken down to the college, department, and individual user level for facilitation and funding team

## Education

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**Senior, University of Wisconsin - Madison** Expected Graduation: Spring 2024

**Data Science (B.S.) and Information Science (B.S.)** with certificate (minor) in **Computer Sciences**

**Cumulative GPA:** 3.20 - **3.48** in-major (Fall 2021 - present) - **Dean's List** (SP23)

- Changed major/career path from Biochemistry (Spring 2021)
- dotData Club Member, Web Development Club Member

## Coursework

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**Relevant Coursework:** Calculus I-II, Programming I-III, Data Science Programming I-II, Data Modeling and Statistics I-II, Elementary Matrix and Linear Algebra, Applied Categorical Data Analysis, Introduction to Big Data Systems, Applied Database Design, Web Design for the Sciences, Interactive Systems Design