Junhson Jean-Baptiste

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Professional Experience

Figma **Manhattan, NY**

Software Engineer - Databases Team (Golang) *July 2022 - February 2024*

- Contributed to horizontal sharding initiative, actively participating in key projects to increase database scalability
- Collaborated on the development of an internal library, exposing sharded topology metadata to infrastructure services
- Defined and provisioned ECS task to bootstrap topologies in development clusters, enabling testing with topology library
- Refactored connection management library and operations CLI to connect to horizontally sharded database instances
- Implemented tests and invariants to enforce correct operation and proactively identify potential issues
- Spearheaded team-wide adoption of a unified error library, streamlining error handling across codebases

Binghamton University **Binghamton, NY**

Teaching/Course Assistant *August 2020 - December 2021*

- Grade assignments and host weekly lab sessions/office hours to help students understand architecture/programming
- Courses Taught: Data Structures, Computer Architecture, Systems Programming

MongoDB **Manhattan, NY**

Software Engineering Intern - Sharding Team (C++) *June 2021 - August 2021*

- Restructured metrics reporting for operation that changes shard key without downtime or data loss (Live Resharding)
- Streamlined functionality and performance for computation of destination shards by introducing a new router class
- Collaborated on and co-presented a talk detailing the motivation for resharding and work delivered over the summer

Software Engineering Intern - Query Optimization Team (C++) *June 2020 - August 2020*

- Updated MongoDB Query Language (MQL) to support field names prefixed with '.' and '$' (formerly reserved characters), improving data compatibility and customer efficiency
- Contributed to development of an MQL expression that facilitates retrieval of newly allowed field names
- Led an internal presentation on MQL modifications, ensuring team alignment and understanding of customer impact

Citigroup ICG (Institutional Clients Group) **Manhattan, NY**

Summer Technology Analyst (Python) *June 2019 - August 2019*

- Developed Python functionality to pull regression test data from various SQL databases
- Increased team productivity with scripts that automate error reporting and regression testing
- Delivered an end-of-summer presentation, outlining the work and its impact to engineers and senior management

Skills

Languages: Golang, Python, C/C++, Rust, Java, SQL *(proficient)*; Ruby, JavaScript, HTML/CSS, Sass *(familiar)*

Tools/Software: Git/GitHub, Vim, Linux, Make, Datadog, GDB, Protobuf, MongoDB, PostgreSQL, AWS, Terraform, Docker

Education

Binghamton University, State University New York, Watson School of Engineering **Binghamton, NY**

Master's of Science in Computer Science (Systems Focus) *December 2021*

GPA: 3.27/4.00

Binghamton University, State University New York, Watson School of Engineering **Binghamton, NY**

Bachelor's of Science in Computer Science *December 2020*

Major GPA: 3.21/4.00

Project Experience

Major Key: Key-Value Datastore **Hempstead, NY**

Software Developer *December 2020 - Present*

- Composed a design document with plans and outline for a distributed (sharded and replicated) key-value datastore
- Built datastore based on RAFT algorithm in Rust using BSON, protocol buffers, and TCP networking libraries

Image Encoder/Decoder **Binghamton, NY**

Software Developer *January 2020 - May 2020*

- Designed a program using Rust to decode/encode messages into PPM images while maintaining photo contents
- Leveraged Rust's "Fearless Concurrency" features to accelerate program speed via multithreading over a folder of images
- Wrote a JavaScript web client to upload photos and transfer picture contents via WASM for encoding/decoding