

Dan Rammer

Software Engineer - Distributed Systems / Backend
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Education

Colorado State University

Ph.D. in Computer Science

Fort Collins, CO

Fall 2021

- *CS Graduate Fellowship*: awarded as the departments top graduate student for the '20 - '21 academic year.

M.S. in Computer Science, GPA: 3.87 / 4.0

Spring 2018

University of Wisconsin - Oshkosh

B.S. in Computer Science, Major GPA: 3.6 / 4.0

Oshkosh, WI

Spring 2013

- *NCAA Track & Field Academic All-American*: National Championship competitor with academic excellence.

Experience

Union AI

Software Engineer - Distributed Systems / Backend

Seattle, WA

August 2021 - Present

- OSS Team Member and Core Maintainer of [Flyte](#), a cloud-native workflow orchestration framework.
- Designed, authored, and implemented RFC's for [performance observability and benchmarking](#), [horizontal scaling](#), [cache serialization](#), and [human-in-the-loop workflows](#) among others.
- Frequently collaborate with the community to review and merge PR's, triage issues, and provide technical guidance.

Colorado State University

Graduate Research Assistant - Distributed Systems

Fort Collins, CO

August 2017 - August 2021

- Architected extensions to HDFS and Apache Spark which improve spatiotemporal bounded analytics performance by up to 4x and reduce disk and network I/O by 3 orders of magnitude. [[NahFS](#)] [[NahSpark](#)]
- Implemented distributed satellite imagery storage framework to reduce spatial deep learning training durations by up to 13.3x by improving CPU / GPU utilization and reducing network I/O by several orders of magnitude. [[STIP](#)]
- Developed an HDFS-compliant distributed file system which leverages lossy compression to provide near in-memory analytics speeds (up to 500x faster than on-disk HDFS) over large, spatiotemporal datasets. [[Anamnesis](#)]

Graduate Research Assistant - Network Security

May 2015 - August 2017

- Created, deployed, and managed a global-scale, cloud-based (i.e., Azure, AWS, Google Cloud) application service monitoring framework to detect Internet outages and identify the cause. [[Proddle](#)]
- Contributed to distributed capture and storage of global-scale BGP routing messages used to detect prefix hijacks and Internet-scale routing anomalies. [[BGPmon](#)]

Technical Skills

Languages: Go, Rust, Java, Python

Analytic Frameworks: Hadoop, Spark

Storage Solutions: HDFS, Cassandra, MongoDB

Cloud Infrastructure: Kubernetes, Docker