



Krishna Rajendram Bashyam

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EDUCATION

Arizona State University

Tempe, AZ

Master of Science in Computer Science

Aug 2021 - Dec 2022

Coursework: Cloud computing, Distributed database systems, DBMS implementation, Foundations of algorithms

National Institute of Technology Trichy

Tiruchirappalli, India

Bachelor of Technology in Computer Science and Engineering

Jul 2014 - Jun 2018

Coursework: Data structures, Operating systems, Design of parallel algorithms, Big data analytics, Advanced DBMS

EXPERIENCE

Chicago Trading Company

Chicago, IL

Engineer

Feb 2023 - Current

- Design and develop scalable and highly available distributed system components for event-driven applications
- Optimize cloud components to compute volatility changes with <500 ms latency for 5k+ trades/min
- Develop and support a system of records using hazelcast for the trading desk to compute and store model inputs
- Worked on building a distributed cloud application utilizing solace message broker for handling treasury spreads and basis values

Akuna Capital

Chicago, IL

Data Infrastructure Intern

Jun 2022 - Aug 2022

- Built a replay pipeline to perform real-time streaming of captured data at up to 150k messages/sec using Akka streams and Kafka.
- Researched and developed a configuration based workflow orchestration tool to deploy and manage Kubernetes applications.
- Monitored and validated data pipelines by building Flink applications and provided trade quality metrics, reducing trade lag by 60%.

Compass

Hyderabad, India

Software Engineer II

Nov 2020 - July 2021

- Improved startup time by 8x using Datadog metrics and optimized performance of the android app using Perfetto and Systrace.
- Designed and built contacts and collection sharing features in the android app, leading a team of 4 developers.
- Increased number of active users by 3x by ensuring 99.9% crash free user sessions using custom exception handlers.
- Developed an engine for server-driven UI using Jetpack compose to deploy features without requiring a Play Store release.

Arcesium (D.E. Shaw)

Hyderabad, India

Senior Software Engineer

Jan 2020 - Oct 2020

- Redesigned pricing applications to active-active architecture using Kafka and containers, improving processing performance by 4x.
- Improved throughput for downstream applications by developing bulk APIs for London Inter-Bank Offered Rate (LIBOR) Cessation.

Software Engineer

July 2018 - Dec 2019

- Snapped and persisted prices for >10k securities/day by developing pricing applications using computational models.
- Reduced costs by \$150k/yr by onboarding 10+ clients to a quantitative finance platform built using Kotlin, Spring, AWS S3, JNI.

Software Engineer Intern

May 2017 - July 2017

- Automated price uploads by implementing a web-based self-service tool which reduced upload time by 75%.

TECHNICAL SKILLS

- Programming:** Kotlin, Scala, Java, SQL, NoSQL, JavaScript, C, C++, Python, HTML, CSS
- Frameworks and Tools:** Hazelcast, Akka, Kafka, Spark, Flink, Docker, Kubernetes, AWS, Spring, Gradle, Android, ReactJS

PROJECTS

Repair pipelining for Clay-Coded Storage | [Code](#) | [Paper](#)

Published, IEEEExplore, COMSNETS, 2021

- Proposed and implemented repair pipelining for clay codes to improve performance by 70% and reduce bandwidth by 4x.

Eclipse Vert.x | [Code](#)

Open source

- Added support for http2 web push and link preload - performance techniques that help in loading resources preemptively.
- Added configurable suffix for compressed files - Send responses without compressing already compressed content.

Apache Sedona | [Code](#)

Open source

- Add ST_BuildArea function that creates an areal geometry formed by the constituent linework of the input geometry.

Distributed File Sharing | [Code](#)

- Built a distributed file sharing platform using Vert.x and Ignite cluster with websocket clients to handle chunked files via WebRTC.