Krishna Rajendram Bashyam

krishnarb3@gmail.com linkedin.com/in/rbkrishna github.com/krishnarb3 +1(602)-813-9291

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

Akuna Capital **Chicago, IL**
Data Infrastructure Intern *Jun 2022 - Current*
- 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.
- Added high performance communication and streaming support to an in-house service generation framework by building a Gradle plugin to integrate gRPC and protobuf.

Software Engineer Intern *May 2017 - July 2017*
- Automated price uploads by implementing a web-based self-service tool which reduced upload time by 75%.
- Parsed and persisted price files by developing a configurable parser using Java, Apache POI and ReactJS.

TECHNICAL SKILLS

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

PROJECTS

Repair pipelining for Clay-Coded Storage | **Code** | **Paper** *Published, IEEExplore, 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.

ACHIEVEMENTS

- **Winners** among 200+ teams, *inGenius Hackathon '16*, built an app for sharing wifi credentials using sound waves.
- **Top 5** among 500+ teams, *inOut Hackathon '17*, built a Distributed computing mobile framework analogous to AWS Lambda
- **Runners up** among 100+ teams, *Sangam '16*, adjudged by Honeywell, built a Fall detector and client using OpenCV and RTMP.
- **480+ stars** on Github, Built Popview Android, a library for pop and trackback animation on any android view.