

SINDHU MURTHY

Lead Software Engineer

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POSITIONING STATEMENT

Seeking a Software Engineer role to apply proven expertise in building high-volume, distributed backend systems, scalable microservices, and ML-driven personalization to deliver high-impact, high-performance products that connect people globally.

PROFESSIONAL PROFILE

Lead Software Engineer with 8+ years of experience building high-scale distributed systems, data pipelines, and ML/AI-driven platforms. Expertise in Java, Python, Spring Boot, GCP, Kafka, Pub/Sub, and cloud-native microservices, with a track record of improving system performance, reliability, and scalability for products serving millions of users.

CORE COMPETENCIES

- Java, Python, Spring Boot, Django
- Data Analysis & Data Model Design
- Distributed Systems Architecture
- Relational & NoSQL Databases
- Agile Development & Cross Collaboration
- Performance Optimization & Caching
- Scalable Microservices Development
- Machine Learning Integration
- Performance Optimization
- Messaging Systems
- API Development
- Cloud Platforms

TECHNICAL PROFICIENCIES

- **Languages & Frameworks:** Java, Python, Spring Boot, Django, GraphQL
- **Cloud & Messaging:** GCP, AWS SNS, Google Pub/Sub, Kafka, Google Secret Manager
- **Data & Caching:** Postgres, MySQL, Redis, Yugabyte, MongoDB, Apache Solr
- **Tools:** Docker, Kubernetes, Jenkins, Gradle, Liquibase, Prometheus, Grafana, NewRelic

WORK EXPERIENCE

Lead Software Engineer - Paramount, San Francisco, CA, April 2018 to Present

- Architected a data ingestion pipeline for agentic AI workflows, streaming content from BigQuery in Avro format into Google Bigtable to enable scalable, low-latency data access; currently driving AlloyDB integration to expand data persistence and retrieval capabilities.
- Led and implemented an event-driven Pub/Sub pipeline to reduce UFC highlight delivery SLA to under 2 minutes on Paramount+, supporting millions of concurrent viewers and sustaining tens of thousands of requests/sec during live fights.
- Architect and deploy ML-driven personalization systems that deliver tailored content carousels based on user demographics, leveraging TensorFlow, Pandas, and Django to integrate data ingestion, scoring, and recommendation logic into production-ready systems.
- Delivered uninterrupted, high-quality streaming during high-visibility global events (i.e. Super Bowl 2024) through proactive system scaling and fault-tolerant architecture.
- Supervise and mobilize high-quality performance from a team of five engineers while also mentoring interns. Design and maintain scalable ingestion microservices for video metadata processing and curation while ensuring system resiliency, fault tolerance, and high throughput during peak traffic events such as live sports and global broadcasts.
- Enhance search platform efficiency by optimizing Apache Solr architecture and restructuring data into nested/child documents to significantly reduce index size and improve query performance, enabling faster content retrieval for millions of users. Boosted Solr search performance 3x; reduced index size 7x via nested/child docs.
- Developed a GraphQL API gateway to unify data access across services by lowering integration overhead, simplifying client-side data fetching, and reducing the need for multiple network requests.
- Integrate AWS SNS and Google Pub/Sub messaging pipelines with validation and error handling mechanisms to guarantee reliable, secure, and consistent message delivery across distributed systems.

- Build microservices to support targeted ad delivery, implementing retry logic, rate limiting, and multithreaded processing to ensure consistent ad-serving quality and compliance with advertiser requirements.
- Expand observability and monitoring coverage across ingestion pipelines using Prometheus, Grafana, and Kafka metrics, enabling real-time health checks, alerting, and root cause analysis for system issues.
- Collaborate with cross-functional teams such as product management, DevOps, and data science to align feature development with business goals by translating technical challenges into actionable solutions.

Software Engineer

Nisum Technologies at Macys.com, San Francisco, CA, August 2014 to November 2015

- Led backend API design and development for customer-facing shopping features to ensure high availability and scalability during seasonal traffic surges, including major holiday sales periods.
- Implemented dynamic deals functionality that allowed for tailored promotions and offers to improve shopping personalization and enabling marketing flexibility in campaign delivery.
- Mentored a team of four engineers by providing code reviews, design guidance, and technical leadership to improve code quality and accelerate development timelines.
- Partnered with front-end teams to ensure seamless integration of API endpoints with responsive, user-friendly UI components.
- Applied secure coding practices aligned with OWASP standards to protect sensitive customer information and maintain PCI compliance for transactions.
- Improved CI/CD processes to streamline feature deployment and reduce delays between development and release to production. Defined and automated test cases with QA teams to validate API functionality and improve defect detection in pre-production environments.
- Monitored and resolved production incidents to ensure minimal downtime and maintain a positive customer experience during peak shopping periods.

EDUCATION

Master of Science in Computer Science, 2013

Western Kentucky University, Bowling Green, KY

Thesis: Simulating Quality Enhancement with Selected Replacement Policies

Secretary, ACM Chapter (2011)

AWARDS AND ACCOMPLISHMENTS

- Jason Randell Leadership Award, Paramount+
 - o One of 2 recipients selected company-wide for exemplary leadership and innovation. Award named in honor of Paramount Streaming's leader, Jason Randell.
- Creator of [whatfeeling](#), an emotion recognition web app for mental wellness and [coscoscon](#), a space for self-care.
- Volunteer Instructor, Girls Who Code, 2023 to Present
- 2nd Place, Idea U State Competition, University of Kentucky (\$5,000 prize)