Nagarjuna Kocharla (Arjun)

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LinkedIn | GitHub | Portfolio

PROFILE

Software Engineer with 4+ years of experience designing and scaling high -performance backend systems, distributed

CAMP Systems International

• Engineered real-time, low-latency data processing pipelines leveraging Apache Kafka, Debezium, and Elasticsearch, achieving sub-second data indexing and rapid retrieval of critical alerts under high-load production conditions.

architectures , and real -time data pipelines. Proficient in .NET (C#), Python, Java, and SQL/NoSQL databases

(PostgreSQL, SQL Server , Redis, MongoDB), with expertise in building cloud -native solutions on AWS and Azure

using Docker, Kubernetes, and Terraform . Skilled in performance tuning, system optimization, and production incident

management, with a proven ability to deliver resilient, scalable systems under high load.

SKILLS

Programming Languages: Python, C#, C++, Java, JavaScript, SQL

Frameworks & Libraries: .NET Co re, Entity Framework, React.js, Node.js, Django, Flask, TensorFlow .

Databases: PostgreSQL, MySQL, SQL Server (MSSQL), MongoDB, Cassandra, Redis

Cloud & DevOps: AWS, Azure, Docker, Kubernetes, Terraform, Snowflake

Messaging & Data Systems: Kafka, Elasticsea rch, gRPC, Debezium

Tools & Practices: Git, Jenkins, CI/CD pipelines, Agile methodologies, XUnit

WORK EXPERIENCE

Software Engineer   06/23
- Present

CentrAlert, Charlotte, NC

Designed and scaled a distributed backend system for an emergency communications platform serving 100,000+

users, using .NET (C# 9.0+), Python, and SQL Server; architected REST and gRPC APIs , reducing end -to-end

latency by 40% and enabling seamless third -party integrations.

Optimized multithreaded backend services through advanced task scheduling, thread pooling, and concurrency

tuning in .NET, increasing system throughput by 30% and reducing peak -time processing latency by 25%.

Engineered a real -time, low -latency search capa bility leveraging Elasticsearch , Kafka, and Debezium ,

achieving sub -second data indexing and rapid retrieval of critical alerts under high -load production conditions.

Software Development Engineer
07/19 - 07/21

Tata Consultancy Services, Hyderabad, India

Engineered and optimized high-performance PostgreSQL and SQL Server databases by tuning complex queries,

implementing B-Tree and Hash indexes , and applying table partitioning, reducing query latency by 40% and boosting system

scalability by 30% under production load.

Automated database cluster provisioning, version upgrades, and seamless migrations using Python, Ansible,

Terraform, and Docker, integrating with Jenkins CI/CD pipelines to cut deployment times by 50% and ensure zero -downtime

releases across cloud environments.

Designed and deployed distributed database architectures (PostgreSQL, Redis) incorporating replication, sharding, and

fault-tolerant configurations, achieving 99.99% uptime and a 3x improvement in high -concurrency transaction

throughput .

INTERNSHIP S

Software Engineering Intern
05/22 - 08/22

CAMP Systems International, Merrimack, NH

Designed and implemented a unified Multi -Factor Authentication (MFA) system using Identity Server and

OAuth 2.0 for the CAMP Engine Maintenance suite, reducing client authentication issues by 40% and strengthening

application security layers.

Optimized application -to-database mapping with Entity Framework (C#/.NET), integrated PostgreSQL for

scalable data management, and leveraged AWS S3 for object storage, improving horizontal scalability to efficiently

handle increased user loads.

Developed and automated unit testing suites using XUnit in C#, contributing to a 20% reduction in critical

product ion issues and enhancing deployment confidence.

Peer Tutor, Data Science   10/21 - 01/22

University of Massachusetts at Lowell, MA

Tutored graduate students in Data Science and Machine Learning concepts using Python, R, Scikit -Learn , and

TensorFlow , designing tailored learning materials and contributing to academic success for a cohort of 30+ students .

EDUCATION

Master of Science in Computer Science
08/21 - 05/23

University of Massachusetts at Lowell, MA

Bachelor of Technology in Electronics and Communications Engineering .
07/15 -05/19

SreeNidhi Institute of Science and Technology (SNIST), Hyderabad, India.