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.