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Tej Kashi

Summary of Qualifications

- 5+ years of strong experience in developing large-scale, high-performance, reactive systems, message-oriented middlewares, microservices, and secure, low-latency APIs using Java, Python, RabbitMQ, PostgreSQL, Elasticsearch, AWS, Docker Swarm and Ansible.
- Demonstrated experience in working with raft-based, distributed transactional systems. Deep understanding of distributed systems principles, consensus protocols, database systems, concurrency, and general computer science fundamentals.

Education

2021 – Now **Master of Mathematics in Computer Science**, *University of Waterloo*, Waterloo, Canada
Thesis work: "Eventual Durability of Transactions in Database Systems" under Dr Ken Salem.
Course average – 93.25%

2014 – 2018 **Bachelor of Engineering in Computer Science**, *Christ University*, Bangalore, India
3.93 GPA, Graduated top of the class with a gold medal.

Work Experience

2020 – 2021 **Senior Software Engineer**, *ARTPARK, Indian Institute of Science*), Bangalore

- Led a team of four engineers, and closely collaborated with engineering teams and start-ups in architecting, developing and deploying a service that identified Covid-19 from chest X-Ray images. This platform garnered national attention in India and was featured in major news networks like NDTV, CNBC-TV18 and India Today.
- Spearheaded, and actively contributed to three noteworthy projects while managing timelines, delegating responsibilities and performing code reviews:
  a) A scalable, low-latency middleware for data exchange built using Java, RabbitMQ, PostgreSQL, Elasticsearch, Docker and AWS.
  b) A high-performance, near-real-time video server with robust authentication and authorisation built using the NGINX RTMP module. This video server was used by the remote-driving team building semi-autonomous vehicles to control drones and vehicles.
  c) A confidential computing platform built on top of AWS Nitro Enclaves to enable private data exchange with strong cryptographic guarantees.

2018 – 2020 **Technical Associate**, *Indian Institute of Science*, Bangalore

- Worked extensively on developing scalable, high-performance IoT middlewares capable of ingesting data from IoT devices and routing them to downstream subscribers. Used Java, Python, Go, Docker, Docker swarm, RabbitMQ, Elasticsearch, PostgreSQL and Ansible.
- Managed a team of four engineers to develop a COVID-19 data pipeline that ingested data and provided recommendations to the government for targeted COVID testing. Collaborated with government agencies, senior volunteer engineers, start-ups, and teams from other Indian Institutes.
- Handled multiple responsibilities, including translating user requirements into features, overseeing feature deliveries, and delegating responsibilities while also actively contributing to projects.

Skills

- **Languages**: Java, Python, SQL and C.
- **Databases**: Elasticsearch, PostgreSQL, CockroachDB, MongoDB.
- **Tools**: Docker, Docker Swarm, RabbitMQ, Redis, Ansible, Jenkins, Travis, Git.
- **Platforms**: AWS and DigitalOcean.
- **Others**: Distributed systems, consensus protocols, backend systems, system architecture, REST APIs, networks, message queues, microservices, engineering and coding best practices.