SANJAYKUMAR MUTHUKUMAR

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https://msanjay94.github.io/portfolio

Professional Experience

Article - Vancouver, Canada - Software Engineer II   January 2022 - August 2022

- Led the decoupling of 'Reservation' service from a monolith into a microservice which was built with an event-driven architecture using Apache Kafka.
- Designed and implemented decoupling of 'ETA' service and applied a phased deployment approach with increased observability to ensure smooth rollout with **negligible disruption of service**.
- Helped build various metrics and alarms in Cloudwatch to significantly improve the observability of the system and facilitate quick response to issues.
- Proposed and created a POC to use 'EasyPost' to calculate transit times for courierable orders which would fasten and **improve the ETA accuracy for ~40% of the orders**.

Insightly Inc. - Vancouver, Canada - Software Engineer II   January 2021 - November 2021

- Designed and implemented Xero integration to help customers with financial invoicing and reporting directly inside Insightly CRM. This helped **increase the upsell rate by ~25%**.
- Significantly contributed in architecting and implementing Insightly Portal which is the customer facing website that connects customers of Insightly Service with their customers.
- Built key features of Insightly Service such as Workflows which uses an event-driven architecture using Amazon SQS to help trigger actions based on events.
- Collaborated with a small team in an agile environment and developed the Insightly Service application from **scratch to Ready-to-sell in 9 months**.

Zoho Corporation - Chennai, India - Software Engineer   May 2016 - August 2019

- Analyzed and improvised Nginx source code to allow dynamic server addition/removal which **reduced the number of server reloads by 20%** which in turn reduced the number of abruptly dropped client connections.
- Analyzed and implemented key technologies like HTTP/2.0, ECDSA, OCSP Stapling, CAA which improved the security of the application.
- Designed and implemented a Let's Encrypt ACME client to automate and scale certificate purchase process which **reduced time consumption by 90% and increased revenue by 20%**.
- Designed and implemented a Web Application Firewall in Nginx using Lua to provide a quick solution to block spurious requests. The tool can be used to apply rules within seconds across 100+ application servers.

Projects

Artist Classification using song lyrics - Python, NLTK, React.js
- Experimented with Naive Bayes classifier algorithm to classify artists using their song lyrics. NLTK library was used for the algorithm. The classification was performed with an accuracy of ~76%.

Technical Skills

Tech Stack : Java, C#, C, Python, C++, JavaScript, HTML, CSS, MySQL, MS SQL, MongoDB, DynamoDB
Frameworks and Tools : SpringBoot, Struts, gRPC, Mockito, Kafka, AWS, Docker, Git, Nginx, Tomcat, Hg

Essential Skills

- Working alongside Product to write engineering and product design documents.
- Developing timelines for roadmap initiatives and developing POCs to uncover dependencies and the unknowns before starting new projects.
- Leveraging ADRs to track and maintain architectural decisions.

Education

Master of Applied Computer Science   Dalhousie University, NS, CA
Key Courses : Cloud Computing, Network Security, Serverless Data Processing