SANJAYKUMAR MUTHUKUMAR

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Education

Dalhousie University, NS, CA   **Expected December 2020**
Master of Applied Computer Science (GPA : 4.15/4.3)
Key courses
Cloud Computing, Network Security, Serverless Data Processing

Technical Skills

Languages : Java, Python, C, JavaScript
Databases : MySQL, MongoDB
Frameworks : Spring, Struts, Node.js, React.js
Tools : AWS, Docker, Git, Hg, Jira

Professional Experience

Zoho Corporation, Chennai, India - Software Engineer   **May 2016 - August 2019**
Datacenter Management Tool - Java, Spring, HTML, CSS
- Designed and implemented a module in the DC management tool to fully manage the life cycle of network infrastructure components like Load Balancers, DNS, SSL Certificates.
- This helped migrating the server management from AWS to the indigenous tool which helped **cut costs by 30% on Infrastructure expenses.**
- Demonstrated the deficiencies of Struts and the benefits of migrating to Spring to the CTO of Zoho, which was accepted and implemented.

Programmatic SSL Certificate purchase - Java, ACME, REST API
- Demonstrated the benefits of using Let's Encrypt's ACME to purchase SSL certificates programmatically using a PoC [Git].
- Designed and incorporated the tool into the existing system used for certificate purchase.
- Integrated the domain ownership verification into the DC management tool to make the entire process of certificate purchase fully automated.
- The tool helped **reduce time and effort spent on certificate purchase by 90% and increased revenue by 25%**.

R&D - Cloud Infrastructure
- Worked closely with the CTO of Zoho in analysing key technologies to improve the network infrastructure inside the data centre.
- Analysed and demonstrated technologies include : HTTP/2.0, TLSv1.3, CAA, ECDSA, Certificate Transparency, OCSP Stapling.
- Recognized by the CTO as **Game Changer** for the efforts and contributions during the period January 2019 - April 2019.

Academic Projects

Canada Tourism - Microservices based application - Java, Spring, Docker, AWS [Git]
- Designed and developed a microservices based application to demonstrate the benefits of the architecture.
- Implemented a CDN to host static resources and demonstrated the benefits of isolating static resources from dynamic endpoints - Faster page loads using cache-control headers and removing authentication / authorisation logic for static content.

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%.
- Designed a visualization of the tool using React.js.
- Ongoing research to try and detect deepfake audio by applying the classifier on the utterance data of the person impersonated.

To know more about my other interesting projects, head to my git projects.