Sunnyvale, CA, United States
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Muthu Kumaran Lekshmanan

Budding Solutions Architect, passionate about all things data & the power of leveraging open source software to drive value

Technical Skills

Likes: java java-ee machine-learning rest microservices spring-boot bigdata cloud analytics web-services web-applications scala data-science enterprise neural-network deep-learning elasticsearch cep apache-spark ignite apache-kafka apache-flink apex

Experience

Staff software engineer – Brocade Communications *2013 → Current*
java-ee-7, spring-boot, rest, web-services, ignite, apache-kafka-connect, elasticsearch, postgresql, cassandra, microservices, java-websocket, swagger, docker, docker-swarm, apache-spark, wso2cep, infinispan, mybatis, wildfly, nginx, jenkins, confluence, jira, github

Working as Project Lead on a Containerized Java Microservices based next generation Analytics & Management solution called Spectre. - Re-architecting the analytics & management applications as Microservices with the goal of scaling out to manage large networks & improving release cadence. - Implemented an Apache Ignite Data & SQL Grid based in-memory distributed data store/cache service for objects frequently used by other microservices. - Working on Apache Ignite Compute Grid based distributed job scheduling & execution service using Ignite's Distributed Data Structures for distributed asynchronous job management. - As Topology feature lead successfully architected a new functional design & workflow called Context based, entity centric, multidimensional smart topology views, working with UX for UI prototypes. Applying for a patent for the same. - In the process of prototyping a machine learning based predictive analytics solution/service for the Analytics Monitoring Platform.

Worked as Product Owner on a Java EE based Network Analytics Web App called Fabric Insight Portal. - Designed & developed a Websocket gateway framework for bi-directional, fullduplex, real-time data & event push with client. - Developed an API gateway framework for authentication & session management. - Designed & developed an aggregation & parallel querying framework for performance data collection & querying. - Developed a CEP based event processing service for fault data management. - Designed & developed a dashboard & reporting framework/service & a suite of real-time & historical analytics dashboards & reports.

Worked as Feature Lead on a Java EE based Management Web App for Network Advisor - Developed a suite of application services for a network performance monitoring solution called Flow Vision. - Developed a configuration & operational policy monitoring app called COMPASS.

Education

GNIIT in Network Centered Computing Systems Management – National Institute of Information Technology *Mar 2000 → Apr 2004*
java, java-ee, linux, mysql, tomcat, networking

Masters in Computer Applications – University of Madras *Mar 2000 → Apr 2003*
computer-science, programming-languages, algorithm, design, design-patterns, data-structures

Certifications

Convolutional Neural Networks – *Jan 2019 → Current*
https://www.coursera.org/account/accomplishments/verify/4F3FRGERQJES
facial-recognition-system, tensorflow, keras, pandas, conv-neural-network, artificial-neural-network, deep-residual-networks, inception-network, transfer-learning, data-augmentation, computer-vision, deep-convolutional-models, object-detection, object-detection-api, yolo, face-recognition, neural-style-transfer, siamese-network, python, jupyter-notebook, deep-learning

Structuring Machine Learning Projects – *Jan 2019 → Current*
https://www.coursera.org/account/accomplishments/verify/X76LP5E4HURK
machine-learning, deep-learning, inductive-logic-programming, inductive-transfer, orthogonalization, error-analysis, transfer-learning, multi-task-learning, end-to-end-learning

Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization – *Mar 2018 → Current*
https://www.coursera.org/account/accomplishments/verify/ZTKT9TQHYG9Q
hyperparameters, hyperparameter-optimization, hyperparameter-tuning, regularization, tensorflow, deep-learning, gradient-descent, gradient-checking, optimization-algorithms, batch-normalization, softmax, keras, python, jupyter-notebook, neural-network, artificial-neural-networks

Neural Networks and Deep Learning – *Mar 2018 → Current*
https://www.coursera.org/account/accomplishments/verify/YJ2ACJZWYDEE
artificial-neural-networks, backpropagation, python, deep-learning, neural-network, jupyter-notebook

Python for Data Science – https://www.datacamp.com/statement-of-accomplishment/course/971946a22e943e5ca17c5058b61d595181dc304f *Sep 2017 → Current*
data-science, python

Functional Programming Principles in Scala – *Nov 2016 → Dec 2016*
https://www.coursera.org/account/accomplishments/verify/ZGVXQDX3PFY7
scala, functional-programming, scalastyle, apache-spark, sbt, algorithm, data-structures

Machine Learning – https://www.coursera.org/account/accomplishments/verify/NTVS6H47K8EP *Oct 2016 → Dec 2016*
machine-learning, neural-network, octave, matlab, linear-regression, logistic-regression, classification, anomaly-detection, pca, collaborative-filtering, recommendation-engine, speech-recognition, image-recognition, svm, supervised-learning, unsupervised-learning, dimensionality-reduction

Certified Developer For Apache Spark & Big Data – http://www.infoobjects.com/training/?lipi=urn%3Ali%3Apage%3Ad_flagship3_profile_view_base%3BYf896CiERy2zOAWBhZzaPg%3D%3D *Nov 2015 → Dec 2015*
bigdata, hadoop, apache-pig, flume, apache-spark, apache-kafka, yarn, hive, hbase, cassandra, spark-streaming, apache-spark-mllib, amazon-s3, hdfs, parquet

Others

Systems and Methods for Context Based Multi-Dimensional Network Visualization – Patent *Oct 2018*
topology, networkmanager, san, monitoring, administration

The invention is about a new way to approach, build & use smart adaptive network topology views that are context based. These views are adapted to provide focused, relevant & contextual multidimensional views of the infrastructure that are specific & intelligently tailored for the various contexts from which the user views network topology.

This context centric topology view approach & design enables the creation of simplified yet insightful topology views for various physical & logical contexts. They provide understanding of not just connectivity but also health, utilization, availability & performance from the perspective of the context.

In addition, it also provides ways to introduce various seamless navigation & integration workflows that are intended to greatly simplify configuration, issue identification and troubleshooting use cases.

Tools

Favorite Editor: vim, atom, notepad++