# THANGAVEL DEVENDIRAN

Hands-On contributor architecting and crafting technical business **solutions** combined with developing Monolithic and **Microservices** based **applications** customizing framework with J2EE, Spring MVC, Spring Boot, JPA, Hibernate and mentoring junior developers, following code standards, testing, deploying, setting up & configuring environment with efficient cost effective auto scalable n-tier **AWS Cloud Infrastructure** with EKS(**Kubernetes**), S3, EC2, EKS, Docker BeanTalk, CloudFormation, VPC, ELB, CloudWatch, AutoScaling, IAM, RDS, SQS, SWF, SNS, Route53, ElastiCache, Additional Key service, Linux OS VM, SFTP setup, Mail server setup, Firewall rule setup, public DNS domain setup, Local Active directory DNS configuration, load balanced web servers, clustered well configured application servers with JNDI connection pooling and centralized logging, clustered optimal fine-tuned secured *Database* servers such as Oracle/Mariadb(MySql)/MS SQL/PostgreSQL and fabricated ESB for SIT->UAT->QA->Production with fully automated and integrated **DevOps CI/CD** workflow using JIRA, GIT, BITBUCKETS, Pipeline/Jenkins, Selenium , SONAR, Load testing, Profiling, performance tuning and maintaining reliable, highly available and scalable Enterprise Applications with reliable backup, archive and DR ready platform in a variety of business domain and mainly in Singapore Government public Sectors IT projects.

# KEy STRENGTHS

* Over 20+ years worked as a dedicated Technical person in Singapore and Australia for various development project mainly for MOE, CAAS, SINGTEL, PMO, MOH & iDA , ComfortDelgro(Singapore Technology), Bluworld, Qoolmart, DHL, UrbanFox, etc.
* Design, develop and maintain enterprise grade, highly scalable and high performing application as micro services that meet both functional and technical requirements including security requirements.
* Planning resources and Lead the software development life cycle process and team
* Managed offshore resources on several projects, collaborating weekly with these resources and developers. This was done in an agile environment using JIRA Scrum methodology.
* Develop Microservice Spring boot Framework code with all the layers for developers to follow and start coding.
* Perform Framework coding, testing, debugging for on-line processes in accordance with industry best practices and specific internal procedures and standards.
* Discuss with all stakeholders and design Databases based on requirements and create database in AWS RDS for microservice development.
* Performed Release management and tracked bug fixing.
* Establish best practices on coding, testing, code reviews, version control, continuous integration, continuous deployment and documentation.
* Strong experience in Application Servers like Web logic, Web sphere, Redhat Jboss and Tomcat server.
* Strong in creating/ defining Swagger specs for REST APIs, understand REST principles, Guidelines
* Involved in requirement gathering meetings and produced extensive analysis of the Use Cases and Entity-Relationship and Data Flow Models.
* Contribute to task identification, work effort estimates, and work schedules for development and maintenance activities.
* Hands on experience in Setup and configure all the application environments such as Development, Testing, Staging and Production
* Hands-on experience on automation and securing the Infrastructure on AWS using IAM, KMS, Cognito, API Gateway, Cloud Trail, Cloud Watch, Config, Trusted Advisor, Security Groups, etc.
* Creating and maintaining GIT repositories for all the microservices and DDL scripts.
* Automated DevOps CI/CD workflow by building and deploying microservices as docker images into Kubernetes (AWS EKS) using JIRA, GIT, BITBUCKETS, Pipeline/Jenkins, Gradle, Kubernetes, Aws Docker Image Registry, JUnit Cucumber, SONAR,
* Design, implement and maintain AWS infrastructure and services within a managed AWS cloud computing platform - S3, EC2, EKS, Docker, BeanTalk, CloudFormation, VPC, ELB, CloudWatch, AutoScaling, IAM, RDS, SQS, SWF, SNS, Route53, ElastiCache, Additional Key service, Security, Risk and compliance, Best Practices, etc
* Created detail design documents for use cases of the system that are signed off by business users.
* Trained new developers to quickly adapt to the development environment.
* Implementing the nightly batch jobs to process the data.
* Prepare UAT and executed UAT smoothly with Users. Tracked test cases result and reported to Developer to fix it on time.
* Setup and configured JIRA for various projects to use Agile Scrum program management to track the project application development.
* Developed and deployed 100s of RESTful APIs for core software services, which widened the software development pipeline, and saved internal and 3rd party.
* Experience on implementing Disaster Recovery/Business Continuity solutions
* Ability to work in a fast-paced, open office environment.
* Excellent written and verbal/Strong English skills.
* Excellent leadership, communication and problem-solving abilities.

# ACADEMIA

Jun ’90 – Jun’92 M.Sc, COMPUTER SCIENCE, BHARATHIDASAN UNIVERSITY, INDIA

Completed the first class degree and awarded college first Rank.

Jun ’89 – Jun’90 P.G.D.C.A, COMPUTER APPLICATION, BHARATHIDASAN UNIVERSITY, INDIA

Graduated in first class.

# TRAINING AND CERTIFICATION

* AWS Certified Solution architect certified
* PMP Certified from PMI, 2011
* TOGAF-8 Certified, 2011
* ITIL: Foundation Certificate in IT Service Management, 2007
* SUN Certified Enterprise Architect for J2EE Platform Part-1, 2005
* Attended 200 hours of **Application Associate / Professional BI with SAP NW 7.0 Certification in 2012**
* Certified Enterprise Architecture Practitioner, Oct 2011, ISS, NUS
* Singapore Workforce Skill Certification – Design Business Architecture, Oct 2011, ISS, NUS
* ICF, Building Enterprise Applications Using Java EE, Aug 2011, ISS, NUS
* SUN trained Sun Java System Application Server
* SUN trained Sun Identity Management Server
* Oracle trained SOA SuitesDec 2018- Present

# employment summary

Dec 2018-Present UrbanFox Pte Ltd ( Keppel Group)

System Architect/Java Tech Lead/ DevOps

Dec 2016- Dec 2018 Bluworld Pte Ltd

Technical Architect/Tech Lead/ DevOps

Jan 2016- Nov 2016 ST Info-Comm Technology Pte Ltd - ComforDelgro

Solution Architect/ Technical Lead/Devops

Feb 2013 – Dec 2015 CSC Technology Singapore Pte Ltd

Solution Architect/ Senior Java Consultant

Feb 2010 – Jan 2013 NCSI, Melbourne, Australia (Client: Thales Australia)

*Senior IT Consultant/ Lead IT Architect*

Aug 2002 – Jan ‘2010 NCS PTE LTD, SINGAPORE

Senior IT Consultant/Application Architect

Feb 2000 – May 2002 NETDECISIONS PTE LTD, SINGAPORE

*Senior Software Engineer*

May 1999 – Jan 2000 YCH TECHNOLOGY PTE LTD, SINGAPORE

*Senior Software Engineer*

Dec 1994 – May 1999 ODC TECHNOLOGY PTE LTD, SINGAPORE

*Senior Software Engineer*

Jul 1993 – Nov 1994 Hindustan Aeronautics Ltd, BANGALORE, INDIA

*Software Developer*

# SIGNIFIGANT CONTRIBUTIONS

1. **UranFox Pte Ltd – Omnichannel Management System**

Planned, Designed, architected, developed and implemented Microservices using Spring Boot, AWS Cloud, Docker, Kubernetes(AWS EKS) and API Gateway based OMS system.

The OMS is a centralized platform designed to coordinate all business processes and data coming from UF TMS, UF WMS & MCCP while providing opportunities for data analytics and integration to support functions such as accounting, ERP and external platforms. In the future, it is envisioned to be monetized as a Software-as-a-Service (SaaS) on a subscription basis to external customers. Improve Sales Team Productivity and Reduce Manual Intervention in Daily Operation. UrbanFox has multiple legacy WMS, TMS & Billing System which are unstable and lack of functionality resulting in numerous operational issues. OMS can provide a centralized system to process sales order from end to end.

***Technologies used:***

***Followed complete Software Development Life Cycle Process***

* J2EE, Spring Boot(Microservices), AWS RDS- MySql, Mariadb, Apache Servicemix, Kafka, Hibernate, RESTFul API, JSON, YAML, POSTMAN, Agile-JIRA and Confluence
* Kubernetes(AWS EKS) : Microservices deployed as docker images
* DevOps – CI/CD with GIT, BITBUCKETS, Pipeline, Gradle, JDK 8 and YAML .
* Kafka – Messaging and streaming.
* API Gateway : Routing, integrated with service Discovery, Load Balancer, Filtering, Request Tracing(Zipkin)
* Logging : ELK (Elastic Search)
* Caching : Redis
* AWS cloud computing platform - S3, EC2, EKS, Docker BeanTalk, CloudFormation, VPC, ELB, CloudWatch, AutoScaling, IAM, RDS, SQS, SWF, SNS, Route53, ElastiCache, Additional Key service, Security, Risk and compliance, Best Practices,etc

1. **Bluworld – Highly available Shipment fulfillment Projects**

* Bluworld’s systems are heavily integrated with different third party system. Our Order management system is the endpoint integrated with 100 over RESTfull API (bluAPIServices) using Servicemix/WEB/APP architecture to many merchants whose goods/products are being sent to fulfill their shipments. Our system API have been called by many merchants 24/7 and routed to many of our internal system Warehouse management system, Package Management systems and Kepol system which is integrated and communicated remotely with 100 over parcel delivery Terminals Island wide like SingPost. This is a fully automated warehouse and delivery mechanism.
* Great life time exposure with this startup company since last 2 years with my strong technical experience both on application development and infra setup which gave advantage of resolving any issue in applications quickly.
* Developed 10 over J2EE enterprise applications simultaneously day and night with 12 members onshore team and 20 members offshore teams mainly Order Management System, Package Management System, API Management System, Warehouse Management System, Last Mile Delivery System, bluNotification Service(AWS SES), bluWebsite, bluGate, bluToDHL Integration, etc…
* Architected and implemented everything from scratch a complete full stack of development environment following all the necessary life cycle process, Infrastructure with a corporate LAN using Hyper-V of 20 VM(Linux and Windows server) machines and 15 over AWS EC2 instances, SOPHOS firewall rules, Active directory DNS setting, DHCP setting, Public wildcard domain settings in GoDaddy for every applications, setting up wildcard SSL for all the applications. Routers setting for 100 over delivery terminals, instantly recording corporate customer, products and orders data using SalesForce API for corporate marketing.

***Technologies used:***

* Tomcat Web Server, Jboss Application Servers, MySql, Mariadb, Apache Servicemix, ReSTful, Tiles, Struts, Spring MVC, Hibernate, SOAP, HTTP, FTP, SFTP, JAX-WS, JAX-RS, REST, ESB, iPaaS, JUnit, Cucumber Unit Testing, Agile-JIRA.
* DevOps - GIT, BITBUCKETS, BAMBOO, JENKINS, MAVEN, JDK 8 .
* JMeter for load testing.
* AWS EC2 Instances with Centos 7.X, SFTP, Mail Server, SES, etc

1. **ComforDelgro Project: CITINET3 Taxi booking system for ComfortDelgro.**

* This project involves Design, Development, Supply, Delivery, Installation, Testing, Training and commissioning of CITINET3 Taxi booking system for ComfortDelgro with microservice architecture.
* Studied the flow of Existing Taxi Booking Enterprise EJB based Application CN2 and Converting requirements into technical architecture and design that ultimately constitute the blueprint for the solution.

***Technologies used:***

* Redhat Fuse – ESB and OSGI based J2EE application, JBOSS, FUSE, MQ, Java/J2EE, Open Source ESB, Architectural Concepts, SOAP, HTTP, FTP, SFTP, JAX-WS, JAX-RS, REST, ESB, iPaaS, Cloud Integration, Micro Services. JUnit, Cucumber Unit Testing, Agile-JIRA.
* DevOps - GIT, JENKINS, MAVEN, JDK 8 and JBOSS Development studio.
* JMeter for load testing.

1. **Multiple projects for Ministry of Health, Singapore – SDCS, PTMS, GP-PRMS, ELIS And IRIS:**

* These projects involve Design, Development, Supply, Delivery, Installation, Testing, Training and commissioning of the applications for Ministry of Health (MOH).

1. **TALENT MANAGEMENT SYSTEM for Prime Minister Office Singapore :**

* Development of System to supply, deliver, install, test, commission, maintain and support a Talent Management System for the Public Service Division (PSD) of the Prime Minister’s Office (PMO).The objective of the Talent Management System(TMS) is to support, integrate and improve the talent management processes. The system supports PSD to achieve greater efficiency and effectiveness in the development and management of talent pool in the civil service.

1. **Migration and upgrading of iDA’s J2EE Applications from SHINE infra to Gcloud platform , Singapore**

* Focusing on enterprise architecture, J2EE architecture, and intensive hands-on application development, while supporting the aggressive adoption of agile management and development practices.
* Produced a technical specification for custom development and systems integration requirements.
* Produce a detailed technical design document to match the solution design specifications.
* Complete/oversee the custom development and quality assurance efforts for custom work

*Technologies used:* Java, Eclipse, JSP, HTML, CSS, XML, JavaScript, ClearCase, AJAX, Struts 2, Spring 4, Weblogic, Glassfish, Oracle9i/10g/11g, MS Visio, UML, Hibernate

1. **Application development and maintenance for Ministry of Education, Singapore**

*Senior IT Consultant/ Senior Java Consultant, Ministry of Education, 6 years*

* Lead the technical team and provide technical direction for the requirement, design, development and systems integration for customer engagement from requirement phase through implementation.
* Own the development lifecycle and be responsible for managing technical risks and issues throughout the project.
* The project involved **in developing solution and managing** day to day maintenance and enhancing the existing 30 over Enterprise java applications in a controlled standard ITIL environment by rising migration request and change request based on user requirements.

***Technologies used:***

200+ UNIX servers monitoring, 30+ J2EE applications with number of load balanced web & clustered app servers, various clustered Oracle and SQL Server databases and LDAP servers, various report servers, Monitoring tools, batch processing jobs status reporting and Webmethods MOM

1. **StudentHub system for Ministry of Education**

*Senior IT Architect, Ministry of Education, Singapore, 1.5 years*

* The project involved design, manufacture, supply, delivery, installation, integration, testing and commissioning of a StudentHub System on a turn-key basis
* The system comprised of Mainframe Legacy Student data systems which have been used for over 20 years. This system needed to be revamped in order to be in line with latest technologies.
* Studied the requirements based on tender specifications
* Worked with a team of Architects, Business Analysts and other stakeholders for proposing a project winning solution
* Developed a Service Oriented Architecture in the setup and a consistent set of standards & specifications for supporting the environment
* Designed the framework based on solutions

***Technologies used:***UNIX servers, J2EE, Weblogic, Webmethods, Oracle, SAS Data Warehouse tools, CVS, Eclipse,

1. **Lorads III(Air Traffic Control system) software development & integration services for Thales**,

*Senior IT Consultant, Java, Thales, Melbourne, Australia, 2.5 years*

* Part of a 300 million dollar project developed in Melbourne, Australia as Enterprise Architect for Lorads III Air traffic control system coordinated and implemented for CAAS Singapore
* Lead the technical team and provide technical direction for systems integration, deployment. implementation and testing of the Vendor’s applications
* Prepared system documentation & SLAs, monitored the checklist and reported to senior management

*Technologies used:*

ARIS Toolset, EA,200+ UNIX servers monitoring, 30+ J2EE applications with number of load balanced web & clustered app servers, various clustered Oracle and SQL Server databases and LDAP servers, various report servers, Monitoring tools, batch processing jobs status reporting and Webmethods MOM

# Technical EXPERTISE

* **FrameWork** – Struts, SpringMVC, Spring Boot, Hibernate and Design patterns
* **WEB APP Technology** - J2EE technology, JBOSS EAP, Servicemix, FUSE, JBOSS ON, WebLogic, WebSphere and Sun Java systems App Servers, Oracle Fusion middleware and Governance suites, Authentication servers such as Site Minder, Syntegra Global Directory Services(X.500) and Sun LDAP identity management systems, Report servers such as Actuate, Brio and Crystal Report servers, monitoring tools such as BMC Patrol, Net IQ, HP Open View..
* **ERP and Data Warehousing Tools-** SAP BW3.5, SEM-BPS, BI7.0, BPC-NW7.0, SAP R/3(ABAP/4), Base SAS, SAS design tools.
* **Relational Database -** MSSLQ Server, MYSQL, MARIADB, ORACLE 8/9/10i/11i/12c, SQL SERVER 7.0 & 2000, DB2, INFORMIX
* **Report Tools -** Crystal Report. Actuate Report, SQL\*Forms.0/4.5/5/6, SQL\*Loader, PL/SQL, SQL\*Reports1.0/2.5
* **Report Server** – Actuate, Brio, JReort,Jasper and Crystal Report servers.
* **Software Design (UML) Techniques -** J2EE Pattern Designs, Design business domain model, Use Case writing, Class Diagram, Package diagram, Sequence/collaboration diagram, Component diagram, Deployment diagram, State Diagram, Activity Diagram, Data flow diagram, E-R Diagram.
* **Internet Technology -** J2EE, EJB, JSP, Webservices framework, SERVLET, APPLET, JAVA BEAN, MOM,JMS,JDBC, SOAP, XML, XSLT HTML, CSS, DHTML, JAVA SCRIPT and .NET basics
* **SOA -** Oracle SOA Suites and Fusion Middleware, FUSE
* **Languages Known -** J2EE Java, C, C++, COBOL, Pascal and Visual Basic and PL/SQL
* **Operating System -** Windows 2003 server, Linux, Sun Solaris, IBM AIX server, Hp-UX, Centod 7.X and RED-HAT
* **Data warehousing Tools -** Base SAS, SAS design tools.
* **Software Design/ Re-engineering/Testing Tools** – Enterprise Architect**,** Eclipse, Rational Rose Enterprise Suite, Mercury Load Runner, Microsoft Visio 2000, Microsoft Power Point, Microsoft Project, Open Office.org
* **Multimedia Tools** - Adobe Photoshop and Macromedia Fireworks