Arul Selvan

Fractional CTO/SVP/VP

Phone: (972) 885-8891 (**VM or TXT message only**)
Resume: https://selvans.net/resume
LinkedIn: https://www.linkedin.com/in/aselvan
GitHub: https://github.com/aselvan

Summary

Hands-on information technology leader (Software Engineering|Cybersecurity|Cloud|DevOps) with three **decades** of experience and a proven track record of architecting and delivering reliable and scalable systems in a variety of areas like network security, credit/banking/financial, healthcare, real estate/multifamily, satellite/medical image processing etc.

15 years of leadership experience in managing large software development projects using Java, Linux, and open-source technologies. Team leadership includes co-located direct reports as well as remote, offshore reports. Thorough knowledge of complete software development phases --- from inception through completion of production deployment and maintenance/support. Experience in architecting and design/development of applications in traditional software delivery model as well as SaaS model. Experience in architecting messaging framework using commercial and open-source MOM products specifically for EAI and legacy application integration. Software development under LINUX including user/kernel module application development, and custom kernel modifications.

Core Skills

Leadership: 15 years of technical leadership (co-located, remote, and offshore) experience in software development/support/maintenance (traditional & SaaS), recruiting, planning, performance management, project management/SM, mentoring/coaching, production hardware/software support and maintenance, internal and external customer relationship management.

Cybersecurity: Threats, risks & vulnerabilities, Incident response, SIEM tools, Security hardening, Security frameworks & controls. Google Certified Cybersecurity Specialization

Container/Cloud/DevOps: Docker/Swarm (expert level), SaaS, AWS EC2/ELB, CloudFormation, Chef, Jenkins, uDeploy

Open Source: Linux (expert level), PostgreSQL, MySQL, Apache-Http (expert level), Tomcat, JBOSS, Postfix.

Environment/Stack: OS (Linux, AIX, Windows, Solaris), Communication (MQ, TIBCO, CORBA, TCP/IP), LAMP, JavaEE, Web Services (SOAP, RESTful), Apache Axis, JAX-WS, Oracle SOA Suite, iOS/Andriod and .NET**.**

Language: Java, C/C++, Unix shell scripts, perl, Linux system & kernel programming, GNU tools, x86 assembly.

Networking/Administration: OSI model, TCP/IP, network analysis using security tools (tcpdump, wireshark, hping, ettercap etc.), Linux system administration (sshd, DNS, DHCP, Firewall, NAT, postfix), hardening/securing Linux servers.

Design/Process: OOAD, Design Patterns, SDLC: Agile methodology, Scrum framework (Scrum Master & Product Owner roles), traditional waterfall, iterative.

Experience

SelvanSoft LLC, Plano, TX
Founder & CEO, Apr 2022 to Present

LaaS (leadership-as-a-service):
- ✪ Technology leadership & management
- ✪ Software development management at [on|off|near] shore
- ✪ InfoSec vulnerability assessment/remediation
- ✪ Cloud transformation/scalability/robustness and maintainability

Software & Technology consulting Services:
- ✪ Software development management at [on|off|near] shore
- ✪ Containerization of new and legacy apps (Docker, k8s technologies)
- ✪ Transform legacy applications to microservices
- ✪ Cloud & on-perm server hardening/administration/support
- ✪ DevOps & Automation

AMN Healthcare, Dallas, TX
Head of Software Engineering, Oct 2021 to Apr 2022

Leading AMN's software engineering organization with an engineering staff of 200+; responsible for overseeing design/architecture, development, delivery & support of multiple SaaS applications spanning across a variety of areas including but not limited to vendor management systems (VMS), credentialing, scheduling, enterprise integration and more.

Realpage Inc., Richardson, TX
Vice President II, Software Engineering– Mar 2019 to Oct 2021

Leading a large global (Richardson, Chicago, Minneapolis, Irvine, Hyderabad & Manila) software engineering organization with an engineering staff of **140+**; responsible for overseeing design/architecture, development, delivery & support of multiple SaaS applications spanning across variety of areas including utility management, spend management, facilities management, vendor management, accounting, asset management, and mobile applications.

Vice President, Software Engineering– Dec 2015 to Mar 2019
Leading a global (Richardson, San Francisco, Hyderabad & Manila) software engineering organization with an engineering staff of **60+**; responsible for design, development, delivery & support of multiple RealPage product lines such as propertyware, realpage exchange and spend management

Capital One, Plano, TX
Sr. Manager, DevOps & Software Engineering – Jan 2012 to Dec 2015

As a DevOps Manager, I am responsible for leading the DevOps group to create/maintain/support pre-production infrastructure (on AWS EC2 using Chef), release management, environments for development, integration testing, performance testing, and full service CICD support.

As a Software Engineering Manager, I am responsible for leading a team of software developers in planning, directing, and overseeing software development process for the middleware (real-time messaging) and Digital Shared Services group. My primary responsibilities include, but are not limited to, technical direction on building SOA based enterprise software components using Oracle SOA Suite, overseeing agile software development process (PO and SM), working with various line of business (LOB), program managers and product owners on requirement/design/integration of software components, addressing customer issues/escalations and production support. Led the effort of design, architecture,

development, and delivery of valuable and business critical webservice (REST & SOAP) components to variety of LOBs such as Mobile, Banking, Enterprise Services, Loan Origination, Scoring/Decisioning. Listed (click here) here are some of the recent and noteworthy SOA components that I have delivered which enabled Capital One LOB products to stay ahead of competition. In addition, I co-lead the software design review board for the entire financial services software group to oversee software design and architecture to adhere to industry standards.

Finally, I am also responsible for all aspects of resource management, including, but not limited to, technical talent acquisition, resource planning, allocation, mid-year and yearly performance evaluation, mentoring/coaching etc.

Realpage Inc., Carrollton, TX
Director, Software Development– Jan 2008 to Jan 2012

Director of Software Development at YieldStar (Revenue Management and Asset Optimization product suite) --- a product division of RealPage, Inc. My primary responsibility is to lead two different technology groups/areas; a global software engineering team, and production hardware/software support/administration/maintenance. My responsibilities include but not limited to providing technical direction on platform and technology selection, agile software development process, plan and implement new and significantly improved systems and services, working with internal and external technology groups to design integration software components, addressing customer issues/escalations, working with IT infrastructure team on software/hardware configuration/monitoring, product release and deployment activities, working with HR on technical talent acquisition, and working with internal/external auditors on SOX auditing. In addition to co-located direct reports, I have also built, trained, and manage offshore software development team that is an extension to US development organization.

Development Manager of YieldStar product suite --- a sophisticated revenue management software for the multifamily industry built on JAVA platform harnessing the power of open source technologies (Linux, PostgreSQL, Tomcat, JBoss, GWT, Spring, Hibernate, ActiveMQ ... and many more). This software is a hosted solution available to our customers via 'software as a service' (SaaS) model lowering TCO. My responsibilities include managing the software development activities, technical leadership and mentoring, process improvement, working with product management on new features and enhancements, working with IT infrastructure team on software/hardware support and deployment activities, and working with HR on talent acquisition.

Experian, Allen, TX
Sr. Manager, Software Development -- Dec 2004 to Jan 2008

Managed several financial (portfolio management, decision engine, credit simulation) application software development using JAVA EE technologies. Architect/Design a generic messaging framework for financial applications to run under any MOM (IBM MQ, TIBCO, Webmethods), on any platform with little or no change. Architect/Design various WebService interfaces and implementations. Responsible for working with product and project management team to ensure that the projects are completed and delivered in a timely manner, working with the business owners on planning and preparing for new projects. Successfully delivered multi-million dollar worth of custom built enterprise class software integration components, services, decision support systems, and legacy EAI components to various divisions such as credit card processing, portfolio management, and loan solutions of major financial corporations (Bank of America, HSBC, Toyota Financial). Received accolade from all of these aforementioned clients for the excellent service provided. [Please see endorsements on my LinkedIn profile under Experian]

McAfee, Plano, TX
Lead Software Engineer -- Mar, 2003 to Dec 2004

Lead Software Engineer for a network security forensics software (developed under LINUX with custom kernel modification and kernel/user mode applications to stream network data to storage at line rate). The software console component allows user to mine the store and reconstruct/replay various protocols. Developed a prototype on LINUX to

address scalability issues of existing win32 network management software. Developed various sniffer (network monitoring/management) application components. Experience in Ethernet and TCP/IP network analysis and troubleshooting with sniffer network analyzer. [Language: C/C++, JAVA OS: Windows NT/2000/XP, LINUX].

i2 Technologies (now JDA) , Irving, TX
Senior Software Engineer -- Aug, 1998 to Dec, 2002

Designed and developed a process monitoring/management system based on JMX (Java Management Extensions) architecture using Sun Microsystems reference implementation. [Language/Framework: J2EE (JMX, JavaMail, JAXP), Webmethods OS: UNIX(Solaris) Other: ANT, JUNIT]

Principal developer of Local Fulfillment order promising system. Took partially completed, untested prototype code and turned it into working product code of exceptional quality ahead of all projected dates for completion. [Language: J2EE(servlet, JDBC,EJB) OS: UNIX(Solaris),Windows NT]

Member of the Collaborative Fulfillment (CF) Product Development Team. CF is an extensible framework for collaborative brokering of requests to participating suppliers. Designed and developed several CF subsystems like Scheduler for scheduling events, transport API's for HTTP and HTTPS protocol etc. [Language/Framework: J2EE(EJB, servlet, JDBC) CORBA, Tibco, Weblogic OS: UNIX(Solaris)]

Designed and developed Log Manager Service. This is a background daemon process which monitors expired requests on the database and sends a cancel to external systems and removes the expired requests from the database. [Language: Java, J2EE(JDBC),CORBA OS: UNIX(Solaris)]

Designed and developed a JAVA based Message System with publish/subscribe mechanism. The system is very **unique** as it can have subscriber clients from a heterogeneous collection of systems (i.e. the system is independent of platform, transport and language). For example, a C++ client can register to receive messages on a subject via IIOP as transport while a JAVA client can post a message to that subject using RMI as transport. [Language: C++, Java, RMI, CORBA OS: UNIX(Solaris), Windows NT

Consistently received quarterly bonuses for achieving performance objectives above and beyond expectations. Received release bonuses in the form of stock options on every release. As a technical member, served frequently on search and screen committee and technical interview process.

Raytheon Systems Company, Garland, TX
Software Engineer -- Aug, 1996 to Aug 1998

Designed and developed several applications in a distributed computing environment. These applications ingest auxiliary data into satellite image receiving station software system (CRSS - Commercial Remote Sensing System for SatImaging) and were developed on Silicon Graphics platform using variety of COTS tools such as Rogue Wave's View++ and Tool++, UIM/X, Orbix (by Iona - a CORBA tools vendor), and STL tools from Object Space Inc. [Language/Framework: C++, CORBA,Rogue Wave Tools OS: UNIX(Irix)]

Worked on developing software under MVC framework (Model View Controller - as implemented in Rogue Wave's toolkit) and applications under persistence frame work (in-house developed frame work layered on top of Rogue Wave's DBTools++). [Language: C++, CORBA OS: UNIX(Irix)]

Participated in a two weeks training class on Object-Oriented A&D Methodologies using Fusion Method. Participated in a week long course on Design Patterns. Served as a mentor/technical resource for less experienced engineers in understanding and/or problem solving.

Provided technical leadership to the CRSS system and led an effort to correct architectural errors in the system. Corrected several serious problems (such as, excessive use of CPU by idle processes, occasional communication dead-lock between CORBA server applications, random application crash, etc.), that were the cause of a severe, negative impact on system performance. Received a spotlight recognition award for this effort. Nominated for Raytheon E-Systems' 1997 Annual Technological Achievement Award.

Completed a performance analysis of JAVA vs. C++ in the following areas, I/O, memory, JNI call, system call, etc. to evaluate JAVA as a language of choice for SIVAM - a multi million dollar environmental surveillance project for the Brazilian government. [Language: Java, C++ OS: UNIX(HP-UX)]

[GE Medical Systems](#), Milwaukee,WI
Software Engineer -- July, 1995 to Aug 1996.

Worked on many subsystems of the CT scanner software which includes scan prescription, scan control/monitoring GUI interface, interactive graphical prescription of CT scan slices and real-time display of scanned CT images. [Language: C++ OS: UNIX(Irix)]

Led an effort to integrate and restructure the Dynaplan scan subsystem (scan control/monitoring system) for the new HiSpeed CT/i CT scanner. This effort, taking partially completed and untested code and turning it into working product code was accomplished **ahead** of all milestones and with exceptional **quality**. [Language: C++ OS: UNIX(Irix)]

Developed [SmartPrep](#) prototype software for RSNA 95 (Radiological Society of North America) which had a most successful product introduction. Worked with the other software developers in the Host/Control systems to improve their knowledge of the X window system. Won **several awards** ([1](#), [2](#), [3](#), [4](#),) on excellent performance

Project lead and principal developer of [SmartPrep.](#) This software feature allows the operator to visually monitor the contrast increase in the CT images of different parts of the patient's anatomy in real time and to pinpoint the critical time of maximum contrast between blood vessels and tissues to proceed with the actual scan prescriptions. [Language: C++ OS: UNIX(Irix)]

[Erdas Inc (now Hexagon Spacial)](#) Atlanta, GA
Software Engineer -- July 1990 to June 1995.

One of the two member development team of the [Erdas Macro Language](#) (**EML** -- an Xwindow/Motif based scripting language compiler/interpreter and API for creating Graphical User Interface for stand alone application programs) for the Imagine Software (Image Processing and GIS software from ERDAS, Inc.). [Language: C, X/Motif OS: UNIX(Solaris)]

Developed [client-server interface](#) for the Imagine Software. Developed an event-driven device driver and API's for variety of Digitizing Tablet hardware under Xwindow/Motif environment. [Language: C, X/Motif OS: UNIX(Solaris)]

Developed context sensitive on-line help system for the Imagine software using the Frame Viewer (help server from Frame Maker Tech.), and HyperHelp (help server from Bristol Tech). [Language: C, X/Motif OS: UNIX(Solaris)]

Designed and developed a user preference Manager API library and an Xwindow/Motif based preferences Editor. Developed batch management system (on top of UNIX/cron) for the Imagine Software.

Designed and developed many applications for the Imagine Software in the following areas, raster image file management, classification accuracy assessment, thresholding, and histogram plotting tools to aid the visual evaluation of signature histograms.

Designed and developed graphics display device driver for various VGA graphics boards for the PC based ERDAS Image Processing software which **opened up** a new low-cost product line (VGA Erdas) for the company. [Language: C,8088 Assembler OS: DOS]

Served as **instructor** for C Toolkit training courses conducted by ERDAS training facility and provided technical support for developers. As a technical member, served frequently on search and screen committees.

Education

[Environmental Remote Sensing Center](#), [University of Wisconsin](#), Madison, WI
(Ph.D – 1990)
Completed all the course requirements, and qualifier exam for the Ph.D program except thesis defense.
Thesis: Development of fast and improved image classification algorithms.

[Anna University](#), Madras, India
M.Tech Remote Sensing **(1986)**
Thesis: Application of Remote Sensing to Geological and Geomorphic mapping.

[University of Madras](#), Madras, India
M.Sc Marine Geology **(1984), B.Sc** Geology **(1982)**

Presentations

Scarpace, F.L, Selvan, A., Weiler, P. and Seidl, L. , 1992, *Maximum Likelihood Classification Using a Table Look-up Technique*, Technical Papers, 1992 ACSM-ASPRS Annual Convention, ACSM-ASPRS, Washington, DC.

Selvan, A and F.L Scarpace, 1990, *Speeding up Maximum Likelihood Classification Process using a Table Look-Up Technique in a Microcomputer Environment*, Technical Papers, 1990 ACSM-ASPRS Annual Convention, Volume 4 Image Processing/Remote Sensing, ACSM-ASPRS, Denver, CO.

M.Tech thesis at the Symposium on Remote Sensing in Geology held at Ahmedabad, India on September 3, 1986.

Personal

Interact well with people of diverse backgrounds from all areas of the organization and thrive in a team environment. **U.S. Citizen**. References available upon [request](#) or you can checkout online reference at my profile in [LinkedIn.com](#). Please visit my personal page ([Personal Page](#) or [Home Page](#)) if you are interested to know something besides my employment/experience.