

Sanjai Prabahar Krishnamurthi

Architect

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Certified professional with **14 years** of consulting experience in development and maintenance of enterprise applications. Working for a Fortune 200 consulting company; his experience spans across *more than 50 enterprise projects* in several business and technical domains over years.

- Experience in contributing to governance, policy, standards and procedures for **Center of Excellence** teams.
- Excellent documentation skills especially with **Technical diagrams** like UML diagrams and process diagrams.
- Hands-on expertise with tools like Enterprise Architect tool (Sparx), Draw.io, JavaDoc and Visio.
- As a member of many Center of excellence teams, he constantly works with **Enterprise architects**.
- Experienced in design & implementation of many **FSA** (Finance sensitive applications).
- Specialist in providing software solutions with Social – Mobile – Analytics – Cloud features.
- Worked as key team member in several **digital transformation** projects.
- Architected custom solutions in **.Net** (sharepoint, skype), **Java**, Mobile Apps, Automation, Front-end and **AWS/Azure cloud**.
- Significant experience in implementing **architectural concepts** like SPA, MVC, PWA (Progressive web app), Mobile-First, Automation-First, Head-less, Offline-First, 2FA, Data Sync, Threading, Async, Parallel Code, Closure, prototyping and many design patterns in .Net/Java.
- Performed **many roles** like Architect, Technical consultant, Data Analyst, SDET, Automation engineer, DevOps engineer, *Technical system analyst*, Assistant manager, Business analyst, SME, Release and SCM, Team lead, Project lead, Scrum master, manager and *Innovation champion*.
- Experienced in all phases of **SDLC** (Waterfall/Iterative/Agile/ Kanban) – Pre-Sale support, RFX, Estimation, Recruitment, Resource loading, On-boarding, Requirements analysis, HLD, LLD, CUT, Automation, Documentation, CICD and Maintenance (ITIL).
- Serviced across different **business domains** like Information systems, media, life sciences, healthcare and many **technical domains** like Full-Stack development, CMS, DevOps and Cloud.

Top Innovations:

- 2020 - **Testing As A Service** - **IT4IT** based governance model and documentation using EA tool.
- 2015 - **Telemedicine** – customized *Skype for Business* implementation using **.Net** ecosystem.
- 2018 - **Push-Notification framework** - connects enterprise communication system with mobile framework.
- 2016 - **Mobile Framework**- system that bolts angular applications to hybrid apps in **iOS and Android**.
- 2014 - **Enterprise Suite** - bundle of reusable configurable SharePoint features (Roster, Infographics, etc....)
- 2012 - **Use Case Management Tool** - self-evolving effort calculator based on 'UseCases' collected over time.
- 2010-**.Net Auto-Translator** – AOP program that replaces string literals inside an .Net build with translations.
- **Automations** - cluster of dexterous tools like Use Case Tool, Custom .Net framework, User Provisioning etc..

Top 5 solutions:

- Created and implemented TaaS (Testing as a Service) model in-line with IT4IT framework.
- Architected tele-medicine application with innovative design that reduced 70% cost each year.
- First to design and release Healthcare “Broker Mobile App” in North America. Strategized, formulated and implemented mobile framework to reduce 60% effort when building new apps.
- Architected push notification enterprise infrastructure that is being re-used by more than 20 business areas.
- Wrote a mobile app that delivers electronic board packages at board meetings saving expensive printouts.

Technical Expertise Summary:

- Excellent technical expertise in **Full stack development** from
 - Responsive SPA (Mobile first approach, Offline first approach - PWA)
 - Customizing web pages for Microsoft products (SharePoint, Skype, ASP portals, etc.)
 - Native / Hybrid mobile app - iOS / Android
- Excellent Technical expertise in **Server-based Application development** using
 - **.Net** ecosystem (ASP, WCF, WPF, MVC, SOAP/REST, WinForms, Windows Services, C#, VB).
 - **Java** ecosystem (Core Java 11, Spring MVC REST APIs, Selenium, F3270)
 - AWS Lambda, Azure Functions
- Have expertise in developing **Client-based Applications** by creating
 - Front-end several pages using **Angular, ReactJS, WPF, jQuery** and JavaScript/CSS libraries and
 - .Net based windows application, WPF application and console/PowerShell clients with local DB.
 - *SharePoint* based JSOM implementations, *Skype for Business* based advanced JavaScript modifications
 - Integration with all types of HTTP methods like GET, POST, OPTIONS, PUT, DELETE and WebSocket services (skype/genesis chat service).
- Have hands-on experience in developing **Automation Testing and Applications** by creating
 - Testing scripts for Mainframe [F3270(Java)], Web [Selenium], Desktop [WinAppDriver], Android [Appium].
 - Testing frameworks like TestNG and Cucumber including reports.
 - Test maintenance and reporting using JIRA based ZEPHYR APIs.
- Worked in **DevOps** team and specialist in writing scripts
 - Jenkins jobs using maven, shell scripts with windows and linux nodes.
 - Written build scripts in NodeJS, PowerShell and linux-shell.
 - Contributed to CI/CD build configuration using GitLab, TestNG plugins and office 365 plugins.
 - Pioneer experience with many source control systems like TFS, SVN, Github, Gitlab.
- Have hands-on experience in developing **Automation Testing and Applications** by creating
 - Automation scripts for Mainframe [F3270 library (Java)], UI [Selenium], Desktop [WinAppDriver], Android app [Appium].
 - Testing frameworks like TestNG and Cucumber including reports.T-SQL, Stored Procedures, SSIS/SSRS,
 - Test maintenance and reporting using JIRA based ZEPHYR APIs.
 - Created a lot of tools using VBA Excel/Word/PowerPoint over years
- Sellable knowledge in following **tools/systems**.
 - Sharepoint (advanced custom development using SOM or COM, maintains several sites), Jira, Zephyr, Servicenow ITSM system, ALM, Android play store, App Store connect, Adobe/Google/WebTrends analytics portals, LogRocket and Swrve portals, Ariba contract management.
 - Enterprise Architect Tool (<https://sparxsystems.us/>)
- Excellent **documentation** and formatting skills not excluding diagrams, indexing, structure, etc..
 - In-depth knowledge (open-xml code level) knowledge on Word, Excel, Powerpoint and Visio.
 - Expert in creating process diagrams & UML diagrams using Draw.io and Visio.
 - Hands-on in creating archimate and other diagrams using Enterprise Architect (Sparx).
- Expertise in DBMS and handling data store using
 - MS SQL queries, Stored procedures, Triggers and Cursors on SDF and MDF.
 - Oracle queries, Stored procedures and DB designs
 - Experience in working with cubes (multidimensional DB) like Cognos T1, SSAS
- Good expertise as **IIS Admin** (on-premises) and **SharePoint admin** (server and site).

7 projects involving finance team:

#1 | **Royalty Database Management System** | Chennai, India | Developer -- Finance Sensitive Application used by Board of directors only.

Technologies: - Ms-Access, VBA, XML, XSLT, SFTP

This Royalty system is a financial sensitive application used by **Client finance teams** to analyze and generate report(s) about royalty statements for their information providers. It captures usage or cost data from various information providers and facilitates the Client Finance team to generate reports on the royalty amount payables for various information providers and to generate reports for decision making purposes based on the usage/cost data available. The system consumes EXCEL file finalized by the Finance Team and Systems. The reports are generated as formatted EXCEL files (or) as web pages [Xml/XSL/HTML] (or) as MS Access reports. These reports are automatically sent to various servers through FTP Transfer.

- The application owner and responsible for creating, testing and deploying new modules to the system.
- Handled the production/ support issues and change requests over the existing system.
- Supported weekly and monthly scheduled activities.
- Responsible for coordinating with on-site teams and closure of remedy tickets.
- Contributed to project by automating FTP transfers using DOS,VBA scripts across networks.

#2 | **SOX Audit Approvals Portal** | Owings Mills, Maryland | Technology Architect --Finance Sensitive Application used by auditors (finance team).

Technologies :- SharePoint 2013, C#.Net 3.5/4.0, MS SQL server 2000+
Tools :- SharePoint Designer 2007/2010, VS 2010

OTS Approval Workflow is developed for a set of **finance audit teams** which handles auditing bulk data. These teams process each datum through a divide and conquer approach. It allows roles like uploader, reviewer, admin and approver to focus on their task with personalized screen and email notifications. Collaboration and reporting is handled by this tool. It also has the ability to provision new data regions, new teams, perform role assignments, configure notification settings and automatic archival.

- Architected the system using SharePoint server object model with added security since finance data is involved.
- Implemented complex SPEventReceivers for lists focusing on DataView mode.
- Designed hidden SPlists to store configuration values for each 'data region'.
- Developed SPTimer Jobs in SharePoint server to send periodic reminders to concerned roles.
- Developed Web Parts that would perform operations at elevated privileges.
- Developed Archival utility that would backup SPlistdata to Enterprise data store.

#3 | **Automation COE** | Boston, MA | Enterprise Architect --Finance Sensitive Applications are tested with automation scripts.

Technologies :- Enterprise Architect (Sparx), Visio, Jira, Zephyr, Jenkins, Maven Java, Powershell, Linux Shell, VM, Linux VM, Docker containers, Mainframe emulators, F3270, UFT, VB Scripts, Java MVC REST/SOAP API, Bots

Executive leadership enforced automation-first across enterprise. Automation COE created linux and java based coding expectations. The goal is to create an IT4IT based service model using available tools and resources to achieve Testing as a Service (TaaS) paradigm. BTPA - **claims payment automation testing** is taken as a pilot project to validate the service model.

- Architected a customized service model using principles in IT4IT.
- Designed and implemented a complex project (BTPA) based on the custom service model successfully.
- Responsible for working with DevOps team, Security team and DBA to implement Technical Runway for all types of automation
- Extensively documented service model using Enterprise Architect (sparx) tool.

- Responsible for creating Physical Model, Logical Model, Business process management Model, Component Model, Deployment Model and UseCase model. He also created all required diagrams in each model.
- Automated component diagram creation process by importing source code and using EA tool API (libraries).
- Created many maven library code bases and versioned them using Jenkins CICD in JFrog artifactory.
- Developed script to create Java libraries by parsing a website under developer supervision and assistance.
- Contributed to maven libraries which simplified integration with JIRA, Zephyr and TestNG using APIs.

#4 | **Member Portal** | Boston, MA | Technical Architect

--Customer facing application with Finance Sensitive Module handling money through bill payment and claims.

Technologies:- Angular 5 and 7, PWA, AWS, IIB-REST, Ioinc, SentryIO, Adobe analytics, Bootstrap 4, Materialize, Flexboxes, Mainframe systems, Oracle, JAVA MVC Rest APIs.

Other tools:- GitHub, GITlab, Jenkins (CICD)

Member portal is a website for members to access information on their accounts. Services offered include **Bill payment (Apple pay)**, **Claims** Search, submit a claim, find a doctor by location, Plan summary and itemized details, deductible / co-insurance status, Doctor visits, Change PCP, Coordination of benefits, Eligibility details benefits, Request ID cards, my profile, member migration (from old portals) and advanced authentication; thereby reducing the CSR call Volume. The portal is a responsive PWA which can be used as a mobile app by itself.

- Designed and implemented several modules like Plan/Benefits, **Claims**, Deductibles-Co-insurance and My Profile involving offline-first approach.
- He is fully responsible for design and implementation of Evalon Apple Pay integrations with iOS mobile app.
- Implemented complex modules like member migration, Id Card (Canvas) and SSO.
- Responsible for code review, code organization, routing guards, storage, encryption/decryption from client side.
- Also, responsible for working with API team and BA to review service interfaces, finalize and document (Swagger).
- Took care of documentation of all NPM, regular code clean-up and on-demand POC.
- Led several Workshops involving all teams (API, BA, Testers, CICD, security, legal, Business, DBA, etc..) for design and implementation of complex modules.
- Involved in defect triage meetings (JIRA based), Scrum meetings and Stand up meetings.
- Created build for various environments through CICD – Jenkins workflows and manually on-demand.
- Experience as AWS admin for all project activity involved.
- Led ionic team (5 member) as part of mobile enablement initiative.

#5 | **Telemedicine** | Owings Mills, Maryland | Solution Architect

--Shared service with Finance Sensitive Modules like cost analysis and auto-claim submissions.

Infrastructure:- IIS 7, Lync 2015 (enterprise topology), MS SQL server 2012

Technologies:- C#, ASP.NET MVC, UCMA, MSPL, advanced JavaScript, PowerShell

In-House Telemedicine uses skype for business technology and provides a way to establish connection between providers and patients. Solution involves customization over 'skype for business' topology. Telemedicine is a system with multiple .net components.

Profit and project funding is based on the money spent on service used. **Money spent** is automatically calculated using fuzzy logic by correlating data from several complex systems like on-call analysis.

- Architected the system after detailed analysis of skype systems and APIs.
- Implemented custom MSPL event handlers in Lync front end server as a windows service.
- Designed SOAP services to share data to the enterprise environment through middleware TIBCO layer.
- Developed participant waiting room with ASP.NET MVC application hosted over an IIS.
- Integrated Lync API with ASP.NET MVC web application by installing certificates and PowerShell scripts.
- Designed MS SQL server database and wrote required stored procedures, triggers and cursors.
- Implemented fuzzy logic to identify user presence across devices (including mobile).
- Implemented complex design of sensitive MSPL interpretation logic.
- Implemented complex logic of calculating money spent and auto claim submission for each call.

#6 | **Board of Directors - BMAI** | Owings Mills, Maryland | Technical Architect
-- Finance Sensitive Application used by Board of directors only.

Technologies: xCode, SharePoint 2013, SVN, REST API, Objective-C

BOD App is developed to be used by the Board Members and Committee Members of Client. This iPad app is used by the directors to see any meeting which is scheduled for them throughout the whole year (user can select any year from the list). This application is used as an information source for Board Meetings, Committee Meeting, Materials, and **annual reports** of the Client. Developed to enhance the communication among board members and aid in hotel reservation on the day of any meeting.

- Designed and implemented modules like Current News, Calendar, Boards, Committees, Message Centre and My Documents.
- Implemented duplex XML based REST communication with SharePoint server.
- Responsible for maintaining and enhancing SharePoint backend sites.
- Wrote all required user guides and operating procedures for the projects.
- Integrated the PDF annotation using 3rd party libraries like AlamoFire, iAnnotate, iCaresoul.

ROI: Reduced 95% cost and improved security many times for critical board packages shared to directors. Improved decision-making process.

#7 | **LS Innovations –Portal tools** | Chennai, India | Developer
--Secure portals holding Finance Sensitive Modules like estimations, budgets and contracts maintenance.

Technologies :- SharePoint 2013, C#.Net 3.5/4.0, MS SQL server 2000+
Tools :- SharePoint Designer 2007/2010, VS 2010

LSInnovation is a SharePoint Portal that hosts all innovative SharePoint tools and finance sensitive documents like funding, cost analysis reports, etc. These portals were staged to display capabilities and innovations from Technology Consulting Group (TCG). Some of the innovative tools include Use Case Point Estimation tools, RFP Dashboard, DAG Dashboard, Mobile pages using mobile frameworks.

Sanjai was the core contributor for this tools repository. He was also responsible for maintenance of LSInnovation tools portal site. He also handled the enhancements for all tools hosted in the SharePoint application. Listed below is the summary of his contributions for some tools.

1. Use Case Point Estimation tool - This tool can collect and does **cost analysis** to implement common use cases and has two versions. One version is developed as an AJAX enabled SharePoint portal and the second version was created in InfoPath 2007. Sanjai was responsible for requirement gathering, designing, implementation, deployment and unit testing of these versions.
2. RFP Dashboard – This tool is used by Mobility BD team and Managers to track and report **RFP estimations (budgeting)** across the LS Mobility Team. Sanjai was responsible for requirement gathering, designing, implementation, deployment and unit testing of this tool. This tool was completely developed in and for SharePoint 2010 environment.
3. DAG Dashboard – This tool was recommended and used by the LS Delivery assurance team. Sanjai was responsible for requirement gathering, designing, implementation, deployment and unit testing.
4. Mobile Pages – This implementation renders the SharePoint 2010 lists in mobile. Sanjai is implemented using Sencha Touch UI framework and ECMA / JSOM [JavaScript Object Model]. He was also responsible for requirement gathering, designing, implementation, deployment and unit testing.

Additional Information:

For information about more exciting projects which i contributed are mentioned in following channels:

LinkedIn: <https://www.linkedin.com/in/sanjai-prabahar/>

Github: <https://github.com/sanjaipk>

WebSite: <https://sanjaipk.github.io/>