Sanjai Prabahar Krishnamurthi
UI 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.

- Expert in architecting Angular/Jquery/JS applications to **improve performance** lazy loading, module definition, api agreements, pre-fetching resources, routing, avoiding shared modules, use of service workers, source app explorer, reduce complexity of code during code reviews, use budgets, css optimizations, gzip optimization, es modules for lodash/moment, use CDN for assets, immutable.js, change detection, CD with longer events, functional programming, component tree clean-up, pure memory memoization
- Hands-on with tools like chrome dev-tools, lighthouse, log rocket, adobe/google/webtrends.
- Implemented D3js, FusionCharts, Google charts for the data visualizations into bar graphs, pie charts, etc.

- Many years of experience in developing **web pages** and user interfaces using HTML5, DHTML, XML/XSLT, DOM, JavaScript, AJAX, REST API, JSON and CSS libraries.
- Expert in implementing **advanced javascrip**t using ECMA, Angular 5+, AngularJS, jQuery (jQuery Mobile), Sencha, SPFx, web components, react.js, underscore.js and basic vue.js.
- Hands-on proficiency with **styling libraries** like Bootstrap, CSS3, SASS, Razor, LESS, Ratchet, jQueryUI, Flex, MaterializeCSS, Metro UI and Angular Material.
- Expertise in web and mobile/tablet UI development with experience in developing **hybrid mobile** applications using custom JavaScript bridge, phonegap, ionic and NativeJS.

- 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.

Front-end projects:

#1 | **Member Portal (Web app)** | Boston, MA | UI Architect
    --Customer facing application with Finance Sensitive Module handling money through bill payment and claims.

Technologies: - Ionic 4, Rxjs, D3.js, HTML5, CSS3, JavaScript, AJAX, JSON, Node.js, Jasmine, Karma, SASS, Materialize CSS, Bootstrap, jQuery, WebStorm, Visual Studio, TFS, Agile, Typescript, IntelliJ, Visual Studio Code, Angular Material, Resolvers, Interfaces, AWS, S3, postman, SOAP UI, SQL developer, Powershell, Excel VBA, Electron.js.

- Front-end development of **Single Page Application(SPA)** pages for member-portal using Angular.
    - o Created Angular project from scratch and created responsive web pages overall the application using _Materializecss_ and Angular _Material_ libraries supporting Angular Framework.
    - o Designed and implemented Angular _animations and carousels_ using Angular.
    - o Developer complex _layouts_, router _guards_ and _wizard-like_ complex modules.
    - o Developed _pie charts and bar graphs_ by using the _**d3.js**_ for co-insurance & deductibles module.
    - o Used _custom mat controls_ for the development of user friendly auto complete forms.
    - o Implemented test cases and performed unit testing using _Jasmine and Karma_. Strong experience with unit, functional and integration testing with API's.
    - o experience in dynamically updating _SVG_ images by creating _overlays_.
- Created **Style Guide** and **Virtual Development Kit** along with UX team
    - o Assisted team to use the _CSS preprocessor_ SASS and implemented common style.css for custom stylings.
    - o Used _Bootstrap modules_ like Material, Accordion, BsDropdown, Modal, Progressbar, Tooltip and Popover.
    - o Claims module was styled using _flex boxes_.
    - o Implemented licensed _FontAwesome_ library base code
- Integrated **encrypted APIs** with angular app.
    - o Extensive use of _Rxjs_ library in Angular 5.0 along with interface and models by adding _ngModel_ directive
    - o Implementation of _security encryption and decryption_ in RESTFUL API calls to adhere to _PHI_ policy and _WCGA 2.1_ guidelines using _crypto.js_
    - **o** Integrated _Drupal APIs_ to front-end pages.
    - o Plans and Benefit module integrated with _multiple complex APIs_.
- Optimized **performance** after doing multiple POCs
    - o Extensively used @ngModule to create _lazy loading_ modules by importing different modules.
    - o Work knowledge in _sw.js (service worker)_ and manifest for creating PWA applications.
    - o Rearranged _code structure_ by breaking down complex components.
    - o During code review, complex functions are caught using _CodeMetrics_ extensions and fixed.
    - o Implemented _routing and guards_ for all complex lazy loaded modules.
    - o Coded encrypted _session storage_ to avoid duplicate api calls.
    - o Enforced use of _pipes and model_ classes across the projects.
- **Architected and implemented** many compex modules like

o member-migration,	o base 5 layouts	o claims module
o myplans and benefits	o FAD functionalities	o deep-linking
o deductibles and coinsurance	o camplain pages, SSO routes	o FPO component

- He also helped **Devops, PMO and QA teams** with below contributions:
    - o Written _build scripts_ with separate configuration for each environment and setup jenkins jobs.
    - o _Automated_ some of the most complex UI modules in selenium-java-maven.
    - o Extended _support_ for _business analysts_ to explain enterprise shared services and datawarehouse.
    - **o** Experience working with Test Driven Development(TDD).
    - o Conducted _daily scrum meetings_ for offshore teams.
    - o Responsible for creating **design documents(CAD)** and _maintaining confluence_ pages.
    - o Responsible for _maintaining JIRA_ epics, stories and related bugs

#2 | **Member Portal (Hybrid App)** | Boston, MA | Technical Architect
   --Customer facing application with Finance Sensitive Module handling money through bill payment and claims.

Technologies:- Angular 7, Ioinc, SentryIO, Adobe analytics, Bootstrap 4, Materialize, Flexboxes, Mainframe systems, Oracle, JAVA MVC Rest APIs.

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 Profile involving offline-first approach.
● Implemented interceptors and used Ngx-store to improve performance.
● 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.

#3 | **Ticket Analytics Portal** | Boston, MD | Application Architect
   --Application for presenting the dashboard with product support KPI and SLA on incident management.

Technologies :- **ReactJS**, Bootstrap 3, Github, Jira API, RxJS, Recharts

Ticket analytics portal is an internal website for product team and leadership team to access information on production support activities like incident management, monitoring and change requests. Services offered include incident attribution across modules, time and teams; It has visualization using recharts; thereby helping in decision-making. Data is sourced from JIRA api and serviceNow DB based internal APIs.

● Designed and integrated charts using recharts, APIs and LDAP services.
● Implemented all modules in the front-end react application.
● Develop CICD using jenkins for future upgrades.
● Led a team of 3 people and as point of contact for all activities related to project from onsite.
● Handled requirement gathering, estimation, documentation, release and training activities.

#4 | **Member Portal (Headless Arch)** | Owings Mills, MD | Application Architect
   --Customer facing application with Finance Sensitive Module handling money through bill payment and claims.

Technologies :- AngularJS 1.x, iFrame-resizer, Bootstrap 3, less, css, Grunt, SVN, Loaddash, jQuery, Urban Code and Urban Deploy (CICD)

Member portal is a website for members to access information on their accounts. Services offered include Claims Search, find a doctor by location, Plan year summary and itemized details, deductible status, Change PCP, Coordination of benefits, Eligibility details benefits, Request ID cards, advanced authentication, push notifications and verifications of coverage; thereby reducing the CSR call Volume.The portal is responsive and embedded inside of hybrid mobile apps in iOS and android stores.

- Designed and integrated Online Chat offered by Genesys chat server.
- Implemented new Claims module with custom notes and label tagging functionality.
- Enhanced timeout functionality of the portal during iframe and SSO redirects.
- Supported implementation of multi factor authentication in website.
- Designed and implemented multi-factor authentication in mobile hybrid environment.
- Resolved issues with mobile enablement of modules like ID Card, download pdf, etc…
- Implemented enhancements to 'Find a provider' custom JS framework.
- Led a team of 7 people and as point of contact for all activities related to project from onsite.
- Handled requirement gathering, estimation, documentation, release and training activities.

#5 | **Mobile Framework** | Owings Mills, MD | Lead Developer
    --Customer facing application with Finance Sensitive Module handling money through bill payment and claims.

Technologies :- AngularJS 1.x Grunt, SVN, Bootstrap 3, less, css, swift, java (android), native code

Mobile Framework is a complex library for iOS and Android hybrid apps. It is designed to consume structured angularJS apps, integrating to Native code base. Framework follows design patterns and provides reusable functionalities such as touch Id, local storage, Push notification reception, sync function, etc... Framework also defined grunt tasks, custom angular service for native app interaction. Using this framework, more than 3 angular SPA are converted to native apps in a short period of time.

- Redesigned Native service in AngularJS for supporting new enhancements and reusability.
- Modified grunt scripts by redesigning tasks and promoted to DevOps team.
- Implemented bridge code to connect Native and angular code base for new mobile apps.
- Enhanced file download and upload angular functionalities for mobile hybrid platform.
- Resolved cookies access issue by replacing logic that use HTML5 local storage.
- Led a team of 4 people and as a single point of contact for all activities related to project.
- Handled requirement gathering, estimation, documentation, release and training activities.

#6 | **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 prasing a website under developer supervision and assistance.
- Contributed to maven libraries which simplified integration with JIRA, Zephyr and TestNG using APIs.

#7 | **Broker Portal** | Owings Mills, MD | Lead Developer
    --Customer facing application with Finance Sensitive Module handling contracts and membership.

Technologies :- AngularJS 1.x, iFrame-resizer, underscore.js, load dash, Bootstrap 3, less, css, Grunt, SVN

Hub is an end-to-end solution for managing your group and member transactions. It is a system for quoting, group setup, enrollment and billing. It is also accessible from any device–computer, phone or tablet. Provides a quick snapshot of ongoing activities and reporting. An exclusive platform available to designated partners, brokers, employers and employees.

● Designed and implemented integration of diversified benefits for broker and sales.
● Implemented census/subscriber import through excel.
● Developed 'staged' process flow for life and disability benefit purchase.
● Designed and implemented, subscriber classification module.
● Led a team of 2 people and as a point of contact in onsite location.

#8 | **SharePoint Apps** | Owings Mills, MD | Lead Developer
        --Shared service used as a tool for internal teams.

Technologies :- jQuery, AngularJS 1.x, Ionic framework, Grunt, SVN, Bootstrap 3, less, css, materialize, SPFx, JSOM

Often the vertical team has some need for tools for the operations team. This project has a set of applications that feeds on SharePoint lists and provides a user-friendly interface. Employee roster is a big SharePoint entity that would store details about any new staff addition and gets updated eventually.

● Implemented Employee Roster with SharePoint JavaScript object model. A tool that is used very heavily on a daily basis.
● Automated associate on-boarding process using jQuery and HTML5 scripting
● Enhanced Employee Roster to an angular app using modernizr and ionic framework.
● Modified complex Lync front end JavaScript code base to accommodate new requirements.

#9 | **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.

#10 | **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.

Technical Expertise Summary:

● Excellent technical expertise in *Full stack development* from
   o Responsive SPA (Mobile first approach, Offline first approach - PWA)
   o Customizing web pages for Microsoft products (SharePoint, Skype, ASP portals, etc.)
   o Native / Hybrid mobile app - iOS / Android

● Excellent Technical expertise in *Server-based Application development* using
   o **.Net** ecosystem (ASP, WCF, WPF, MVC, SOAP/REST, WinForms, Windows Services, C#, VB).
   o **Java** ecosystem (Core Java 11, Spring MVC REST APIs, Selenium, F3270)
   o AWS Lambda, Azure Functions

● Have expertise in developing *Client-based Applications* by creating
   o Front-end several pages using **Angular**, **ReactJS**, **WPF**, **jQuery** and JavaScript/CSS libraries and
   o .Net based windows application, WPF application and console/PowerShell clients with local DB.
   o *SharePoint* based JSOM implementations, *Skype for Business* based advanced JavaScript modifications
   o 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
   o Testing scripts for Mainframe [F3270(Java)], Web [Selenium], Desktop [WinAppDriver], Android [Appium].
   o Testing frameworks like TestNG and Cucumber including reports.
   o Test maintenance and reporting using JIRA based ZEPHYR APIs.

● Worked in **DevOps** team and specialist in writing scripts
   o Jenkins jobs using maven, shell scripts with windows and linux nodes.
   o Written build scripts in NodeJS, PowerShell and linux-shell.
   o Contributed to CICD build configuration using GitLab, TestNG plugins and office 365 plugins.
   o Pioneer experience with many source control systems like TFS, SVN, Github, Gitlab**.**

● Have hands-on experience in developing *Automation Testing and Applications* by creating
   o Automation scripts for Mainframe [F3270 library (Java)], UI [Selenium], Desktop [WinAppDriver], Android app [Appium].
   o Testing frameworks like TestNG and Cucumber including reports.T-SQL, Stored Procedures, SSIS/SSRS,
   o Test maintenance and reporting using JIRA based ZEPHYR APIs.
   o Created a lot of tools using VBA Excel/Word/PowerPoint over years

● Sellable knowledge in following **tools/systems**.
   o 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.
   o Enterprise Architect Tool (https://sparxsystems.us/)

- Excellent **documentation** and formatting skills not excluding diagrams, indexing, structure, etc..
  - o In-depth knowledge (open-xml code level) knowledge on Word, Excel, Powerpoint and Visio.
  - o Expert in creating process diagrams & UML diagrams using Draw.io and Visio.
  - o Hands-on in creating archimate and other diagrams using Enterprise Architect (Sparx).

- Expertise in **DBMS** and handling data store using
  - o MS SQL queries, Stored procedures, Triggers and Cursors on SDF and MDF.
  - o Oracle queries, Stored procedures and DB designs
  - o Experience in working with cubes (multidimensional DB) like Cognos T1, SSAS
- Good expertise as **IIS Admin** (on-premises) and **SharePoint admin** (server and site).

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.
- Architect of 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.

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/