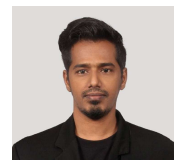


SENTHIL NATHAN



SENIOR SOFTWARE ENGINEER

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EDUCATION

BACHELOR OF ENGINEERING (71.3%)

Electrical and Electronics
Anna University, Chennai, India
2005 – 2008

DIPLOMA DEGREE

(84.8%)
Electrical and Electronics
Department of Technical Education,
Tamilnadu, India
2002 – 2005

ENGINEERING EXPERTISE

Server & VM Migration /Tech Refresh
(Database Upgrade)

DevOps/SCRUM-Agile/Waterfall

Technical Leadership

Project Scheduling

Resource and Work Breakdown Structure
Charts

CASE Tools

UI UX Prototyping

Risk Assessment

Resource Management

CERTIFIED COURSE

Microsoft Certified: Azure “AZ900”

AWS Cloud Practitioner Essentials

Certified Professional Scrum Master
(PSM1)

C, C++, UNIX, J2EE, .NET Programming

“Bootcamp Training (NCS): Solution IT
Architect, Business Systems Analyst”

PROFESSIONAL PROFILE

13 + years of **Software Engineering** experience in Microsoft Technologies on the **DOTNET** platform in all stages of the SDLC (Software Development Life Cycle), including studying user requirements, analysis, design, implementation, testing, deployment, documentation and maintenance of various stand-alone, intranet, cloud computing, client-server and web-based projects, with exposure to diverse business domains including **Healthcare Robotics Automation, Data Storage and Technology, Retailing, and Financial.**

Core competencies include:

- Architecting and designing high-quality **Cloud Native** Greenfields software solutions, translating business requirements into scalable, flexible, and secure systems for public and government commercial cloud platforms using **.NET Ecosystem, Agile and DevOps.**
- Provided **technical leadership**, working with business stakeholders, vendors, and IT management to create scalable and robust Single Page Applications (SPAs) utilizing **Angular, React and Vue.js** frameworks that integrated with **SOAP and Web API** backend services and were hosted on Amazon Web Services (AWS) and Microsoft Azure.
- Keep abreast of industry trends and emerging **AI, ML, IoT and Edge computing** technologies.
- Engaging with cross-functional teams (Product Owner, Business Analyst, QA Practice Lead) in order to conceptualize **prototype designs** and Proof-Of-Concepts (POCs), and turning them into tangible solutions for end users' needs.
- Strong solution orientation and problem-solving skills.

EXPERIENCE SUMMARY

SENIOR SOFTWARE DEVELOPER

Helius Technologies Pte Ltd, Singapore / September 2023 – Present

Client: Synapse (formerly IHIIS- National HealthTech Agency) Singapore

.NET Core, SAP SE, Web API, WCF, ASP.NET, React Native & IOS Hybrid App, SQL 2016-19

- Involved in **product analysis and enhancement implementation** for centralized ‘Supply Chain Inventory Management System’ (web portal) used at TTSH and NUH hospitals and pharmacies, integrating it with SAP SE for retrieving purchase orders and managing goods top-up activities using Microsoft DOTNET technologies.
- Participated in **system requirement gathering**, including both functional and non-functional requirements, in collaboration with system custodians, end users, and vendors (SAP SE). Additionally, recommended technical solutions, analyzed data models and processes, and prepared system proposals with high-level initial designs using Microsoft Visio.
- Developed a **secure SOAP web service** that seamlessly integrates with SAP SE, enabling the retrieval of Material Master (MM) and Purchase Order (PO) information. This initiative led to a substantial **60% reduction in the overall procurement cost for SAP SE.**
- Designed and developed an **iOS hybrid mobile app** to support ward shelf top-up, helping storekeepers expedite their daily inventory checks by leveraging React Native.
- Installed and provided support for web portals, iOS hybrid mobile apps, handheld devices, and the Scandit barcode scanning app used in pharmacy inventory management activities.
 - Goods Receipt** – Storekeeper use handheld devices to verify the PO information during goods receipt.
 - Ward shelf top-up** – Storekeeper use handheld devices to do daily inventory check before replenishing the stock in the wards.
- Implemented a centralized **Inventory Management System (IMS)**, including a web portal and mobile apps, for the new stores at Tan Tock Seng Hospital (TTSH) and the Institute of Mental Health (IMH) hospitals.
- Built a **RESTful web API** that integrates with Microsoft Active Directory (AD) for user authentication on both mobile and web platforms.
- Conducted system integration testing, assisted end users with User Acceptance Testing (UAT), performed penetration testing for security vulnerabilities, and conducted load testing.
- Prepared test cases, technical specifications, functional specifications, data dictionary and system requirements documents for the Inventory Management System web portals.
- Installed SSL certificates for all web portals, REST APIs, and SAP interfacing web services.
- Involved in **optimizing SQL database** for performance efficiency by tuning stored procedures and indexes.

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CORE SKILLS

HL7, QDX, ATT Queue system

SFTP, FTP, Tectia File storage

TCP Client Socket Middleware Integration

API Development

Microservices

OOP Design patterns

Internet Protocol Suite (TCP/IP)

RDBMS

SOA/Monolithic

GUI, UI/ UX (XAML, WPF, HTML/5)

Defect Tracking (JIRA)

Front-End Framework: Node.js, Angular,
React, Vue, Knockout

Software Refactoring

Data Distribution Service

DevOps Azure CI/CD Integration

REFERENCES

RAMASAMY VEERAPPAN

ERP- Supply Chain Apps, Manager
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+65 98189207
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VENKATESH PRABHU

Project Director
Hanodale Technologies Sdn Bhd
Malaysia
+60 126847046
prabhu@hanodale.com

EXPERIENCE SUMMARY *continued*

SENIOR CONSULTANT APPLICATION

NCS Pte Ltd (Singtel Group) Singapore / April 2016 – August 2023

Payroll by (IT CAN Pte Ltd until Oct 2019)

ASP.NET MVC, WPF-MVVM, DevOps, Agile, Node.js & Angular.js, SQL 2016-19, F5 Windows Cluster

- **OPAS**, a signature project developed by NCS (Application & ADM's) & Synapse (Servers), has many national and regional awards and is prevalent (70% use) in the **Singapore Healthcare** system.
- Responsible for **implementing the Outpatient Pharmacy Automation System (OPAS)** and **Fastrak** systems at the National Healthcare Group (NHG), Tan Tock Seng Hospital (TTSH), National University Hospital (NUH), and Singapore General Hospital (SGH). The role involved designing, developing, and building healthcare solutions using Microsoft .NET, SQL Server, leveraging Microsoft Azure, and following an agile-scrum development model.
- Participated in the **requirement analysis phase** to assess the feasibility of implementing functional specifications. Identified requirement gaps, excessive development efforts, technical challenges, and other potential issues, and communicated them to the business analysis teams.
- **Provided technical leadership** throughout the development process by applying established design and development methodologies, ensuring the system met both functional and system requirements for the core modules in OPAS and Fastrak.
- Developed backend **SOAP WCF services** to interface with the ATT system and display queue numbers on the KIOSK at the Pharmacy.
- Participated in code reviews and agile scrum meetings, conducted root cause analysis, and implemented proactive measures to enhance project quality. Provided status reports to higher management to ensure changes were completed according to the project and release schedule.
- **Developed unit test projects for each middleware component** (virtual ADM machines), including ROWA, PARATA, DDS, and RFD Shelves, to simulate inventory stock requests, responses, and drug dispensing in a UAT environment. This approach accelerated development and testing timelines by eliminating the need to wait for physical machines.
- Managed system changes through the established change request process and **enhanced application performance in the BI environment** by tuning code, reviewing tables, and applying indexes as needed to address application slowness and peak load issues.
- **Prepared project documentation** including Requirement Specifications, Use Case Specifications, test cases and plans, SOPs, data dictionaries, version control, migration standards, traceability matrices, and dashboards and reports for new change requests and existing systems.
- Assisted with integration testing, system testing, User Acceptance Testing (UAT), and implementation activities to **troubleshoot critical and high-severity issues**, ensuring smooth program execution in the production environment in accordance with the agreed Service Level Agreement (SLA).
- **Implemented a CI/CD pipeline** to continuously build, test, and deploy applications to staging environments. Managed application deployment in the production environment and ensured that the delivered applications met user expectations.
- **Wrote scripts and programs** for the CI/CD pipeline, Tectia file transfer, Server stats (CPU, Memory usage) extraction, service monitoring, and system health checks using PowerShell scripts.
- Prepared project change request **quotations** and managed routine preventive maintenance and operational activities, including service requests, **report generation, security measures**, backup/restore procedures, and disaster recovery planning.
- Developed unit and load test packages, executed tests, documented the results, and presented them to **ensure program quality** for end users.
- Recommended software acquisition and licensing by gathering necessary information from vendors, suggesting purchases for interfacing components, and testing and installing products such as Bartender, DevExpress, and SSL/SAN Certificates.



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EXPERIENCE SUMMARY *continued*

SENIOR SYSTEM ANALYST

iCrest Sdn Bhd, Malaysia / Jun 2013 – Feb 2016

Client: Western Digital (WD), Petaling Jaya, Malaysia

ASP.NET MVC Bootstrap 3.0, Waterfall, Rest API, WCF, WF, SQL 2012

- **Collaborate** effectively with **Staff Engineer and Business Analysts** to determine software requirements and system impacts.
- Participate in the **use case analysis, architecture designs and core modules development** of software utilities/tools used to help develop, validate, and support Western Digital disk drives, both SSD and HDD.
- **Migrate existing HDD PCS** (Product Configuration System) into highly scalable cutting edge firmware systems that are used set up all the business rules, demand to meet the production which will be used by the assembly line to build the drives.
- **Builds REST based APIs** services for internal software development and external global team.
- **Develops web-based workflow software system** to govern new component releases for HVM builds It avoids down time or incidents of drives failing at backend due to incomplete component release readiness check (i.e. system setup, pipe cleaner completion).
- Integrate data storage solutions, may include databases, key-value stores, blob stores, **Database optimization and fine-tuning**.
- Developed **interactive Web applications** using **Spotfire** for engineering analytics.
- Preparing System Work flow and UAT documents, Functional Specification documents, DBA Production Change List, DBA Create/Alteration documents, User guide and FAQ.
- Involved extensively defect Tracking, Regression testing, and system **Load Test**.
- Preparing **release pipeline includes deployment plan, automated deployment scripts, software release package**; maintaining version control and seeks approval from upper management to deliver the high-quality products in a timely and cost-effective manner.
- Providing **user Training for the new system rollout** or any change on existing system.
- Follow up EPWR (Eval Project Work Request) for debugging and troubleshooting the bugs and Provide feedback and information back to engineering to improve product features, capabilities and performance.

SENIOR SOFTWARE ENGINEER

Multimedia InfoTech Pvt Ltd, India / Apr 2012 – May 2013

ASP.NET C#, WCF, LINQ, SQL 2008 R2

- **Developed** dedicated **web application job portal** to assist students and recent graduates of MIT (Multimedia InfoTech) secure suitable and relevant employment by providing the resources prospective employers and potential employees need to share information effectively, including job matching and referral, employer and student database, comprehensive job listings, and email alerts of new vacancies
- Prepared Use Case diagrams, database designs, development Plans, deployment schedules
- Involved widely in GUI, Functional, Regression testing
- **Prepared reports** using SSRS on system usage and peak load performances

SOFTWARE ENGINEER

Hanodale Technologies Sdn Bhd, Malaysia / Mar 2009 – Mar 2012

ASP.NET C#, VB, jQuery, WCF, LINQ, SQL 2005

- Developed rich thick client and web-based database applications for global customers with a proven track record of **delivering cost-effective solutions** through innovative technologies in various domains
- Demonstrated **expertise in Application Development**, Web Development, Business Intelligence, Engineering, Retailing, Logistics and Healthcare-based IT services
- Prepared UAT documents, Functional Specification documents, Database Change Lists, User guides and FAQs
- Prepared **deployment packages and automation scripts** for monitoring system performance and daily system health checks

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SIGNATURE PROJECTS

National Healthcare Group (NHG) – Singapore

- OPAS
- Fastrak

MIT Corporate Job Portal

Hanodale Technologies Sdn Bhd

- Clinical Posting System – Masterskill University, Malaysia
- E@Works - Urusan Teknologi Wawasan Sdn. Bhd, Malaysia
- VistaPos (Vista Point of Sale)

Synapxe - ERP SAP

- TTSH Pharmacy Supply Chain System
- IMH Inventory Management System
- NUH Good Receipt System
- TTSH FLC Warehouse Management System

Western Digital - Global Manufacturing System

- Product Configuration System 3.5
- CoRe 3.5, EDMS
- T1111 Agility Workflow

TECHNICAL SKILLS

I aspire to a career as a **Software Engineer** in the IT Domain with precise knowledge in Content Management, Customer Relations Management, Document Management and Web Application Management. Up-to-date with changes in technology, as well as the business implications and applications of new technologies.

Microsoft Technologies	: .NET 6.0 and above, .NET Core 3.1, MVC, MVVM, WCF, WPF, WF, ADO.Net, LINQ, Entity Framework, TFS, SharePoint
Project Management	: DevOps (GIT, Azure, Jenkins, Docker, Dynatrace, fortify, SonarQube), Agile-Scrum, Kanban, Waterfall
Programming Languages	: C#, Visual Basic, ASP.NET, C++, PowerShell script
Scripting Languages	: Angular, Knockout JS, React, Vue.js, Bootstrap, jQuery, Node.js, HTML5, TypeScript
Design Pattern/ Design Tools	: SOLID, CQRS- MediatR / Microsoft Visio
Database	: SQL Server 2019 and Above, Oracle 11G, MS Access
Cloud computing	: AWS, Microsoft Azure
Testing Tool	: Selenium, Nunit, Moq, MS Test, JIRA
Internet Technologies	: JSON, Web API, ODATA, WCF SOAP, Web Service, XML, TCP/IP Socket Model
Development IDE	: Visual Studio 2019, Visual Studio Code, Cisco DevNet
Reporting/ ETL	: Spotfire, Dundas BI, Telerik, SSRS, SSIS
Interfacing Middleware	: Blister, DDS (Drug Dispensing system), DPAS, Tote Handler, ROWA, PARATA, RFID Shelves, Conveyor, Robot armatures, PTL (Pick-to-light), ATT Queuing System.
Load Balancer	: F5 Networks GTM & LTM
Server Configuration	: Windows Server 2013, Windows Cluster
Printing Tool	: Seagull Bartender, Dev Express, Client Printing Signal R

