

Balakumar Velusamy

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[My Portfolio Website](#)

MY PROFESSIONAL GROWTH

- Technical Lead Site Reliability Engineer and Technical Architect with an experience of Front-end and full stack Web application with over 12 years of IT experience as Site Reliability Engineer (SRE) including 4+ years of Project Management Experience led with a team of 10+ Software Engineers.
- Experience in Developing Web Application, Automation, Gen AI applications, System Design, Release management, Project management and System architecture.
- Expert in Full Stack Web application development and support, including proficiency in Restful APIs, Python, React JS, React Native, HTML5, UI/UX, Bootstrap, JavaScript, Node JS, Firebase, GIT, SQL, Gen AI, Gemini, Open AI API, Amazon Bedrock and AWS services.
- Skilled in UI/UX development, designing, and end-to-end development and hosting of E-commerce websites.
- Experienced in AWS cloud services, SEO and Cloud Hosting. Program Management Experience is established in Agile Methodology using the SCRUM Process.
- Published mobile app using AWS service and AWS Bedrock AI services in [Expense Tracker App](#) [Recipe AI](#)

SKILLS

Programming Languages	: Python, C#, Dot Net, Node Js
Databases	: SQL Server, DynamoDB, Firebase
Web Development	: JavaScript, TypeScript, React, HTML/CSS, UI/UX, Mobile App development, React Native
Technology	: Git, Amazon Web Services (AWS), Kubernetes
Scripting Languages	: Linux, JavaScript
Monitoring	: Dynatrace, Splunk, CloudWatch, Data Dog
Cloud	: AWS Services, Lambda, SQS, Amplify, SES, Cloud Watch, Bedrock, Lex, Route53
Tools	: SSIS, Solar winds, Open AI, Gemini API, GIT, Kubernetes
Artificial Intelligence	: AWS Bedrock, Open AI, Gemini API
Management Skills	: Agile – Scrum, Resource management, Sprint planning

WORK EXPERIENCE

TATA CONSULTANCY SERVICES, HUMANA

Role: Lead SRE / Technical Lead and Architect, Tennessee, Nashville, USA

Period: Feb 2016 – Present

- Lead, Develop and manage the maintenance and enhancement of Clinical healthcare applications in Responsible Web Design (RWD) format for the Clinical Guidance Exchange with a team of 10+ Software Engineers using the Agile Methodology.
- Highly Experienced in creating API and Have Relevant Knowledge in FHIR Process flow, Clinical Authorization Flow like EPIC, Availity, US Health Care, Member Medical Policy, HIPAA compliance, Medical Code Repository.
- Leads the technical sessions related to the design architecture, technical document preparation, and system development and integration checklists related to the service deployments.
- Implemented the Systematized process for Coordinating onsite team coordination activities, engaging in client interactions, and communicating with stakeholders and IT management improved the productivity of the team in delivering the project.

- Collaborate with multiple teams related to the architectural designs of the health service platform (mainly claim service feature) and technical approaches for the application design.
- Highly Experienced in leading the SSIS migration (Automation Job Process), Web Server Migration, and SQL Server migration projects following industry best practices.
- Delivered a full-end Automation Web application by using a technology stack (SSIS, DOTNET, SQL) that reduced the manual effort of Engineers and cumulatively increased the 10% of the revenue every year.
- Responsible for Implementing security measures and comprehensive monitoring using monitoring tools like Solar Winds, Dynatrace, and Splunk.
- Implemented Gen AI Chat bot using AWS Bedrock, AWS Lex and Guard Rail.

TATA CONSULTANCY SERVICES

Role: Software Engineer, Chennai, Tamilnadu, India

Period: Mar 2014- Feb 2016

- Developed a Clinical Guidance Exchange application for clients focusing on Utilization and Case Management using the technology stack of Angular, DOTNET, SQL, and REST API and Deployed the services to production using cloud platforms like AWS and AZURE.
- Implemented the Migration with multiple supporting teams to migrate the microservices to use Kafka stream sets from legacy applications (BizTalk)
- Created Multiple Dashboards in ServiceNow to Provide near-real-time data on incident and Root Cause analysis, estimation, and solutions for production issues.
- Rewrote legacy ASP .NET Code which was supporting legacy SOAP Format in Supporting MVC architecture and refactored it to make the system more extensible in Supporting Restful APIs.

TATA CONSULTANCY SERVICES

Role: Assistant System Engineer, Chennai, Tamilnadu, India

Period: Feb 2012 – March 2014

- Set up a semi-automated CI/CD pipeline for the developing application in TFS/SecureFX and exceeded requirements in each stage, which led to the application being pushed to production.
- Created UML diagrams and documented where features were implemented, to make the code base more maintainable.
- Designed UI components for web application reliability and compatibility. Conducted debugging with tools like Postman, CURL, Dynatrace, and Splunk.

PROJECTS

PUBLISHED MOBILE APP USING GEN AI FOR BOTH ANDROID AND IOS: [App Store](#) / [Play Store](#)

Technology: React, AWS CDK, S3, Lambda, API Gateway, SQS, DynamoDB, AWS CloudWatch, AWS SES, Gen AI, AWS Bedrock

Period: Aug 2024-Jan 2025

DEVELOPED A MOBILE APP CALLED 'RECIPE AI' USING AI API's - [App Store](#) / [Play Store](#)

Technology: React, AWS CDK, S3, Lambda, API Gateway, SQS, DynamoDB, NextJS, AWS CloudWatch, AWS SES, AWS Bedrock AI API, Gemini API

Period: Dec 2024-Jan 2025

DEVELOPED BLOGGING WEBSITE

Technology: React, AWS CDK, S3, Lambda, API Gateway, SQS, DynamoDB, NextJS, AWS CloudWatch, AWS SES

Period: Jan 2024

- Developing and automating the infrastructure of my website and working on creating a Restful service using API Gateway to send blogging content in JSON format to Queuing service that helps in the scalability of my application which furthers then hits lambda to process the valid data and then stores it back to the DynamoDB. All of the Blog Content is stored in S3 and the metadata is handled by DynamoDB and Monitoring the application is done by configuring the CloudWatch. Further on Planning to Extend it to use AWS Step functions to orchestrate the workflows and extend the blogging articles subscription services via SES mail.

AUTOMATED SYNCING GOOGLE PHOTOS TO ALBUM

Technology: Python, Google Photos API

Period: Jun 2023

A Python script designed to sync local photos to Google Photos using the Google Photos Library API. The script allows us to upload photos from a specified local folder to a designated album on Google Photos. Additionally, it moves the uploaded photos to an archive folder to keep track of synchronized media items.

DEVELOPED AN E-COMMERCE WEBSITE

Technology: ReactJS, Firebase, AWS Amplify, AWS SES, Restful API

Period: Jun 2020

A full-stack e-commerce website, where users can experience the online presence of the Quilting Studio. Created a Front-End application using React JS Framework and integrated multiple REST APIs to send data back and forth to the back-end database as a Firebase multiple AWS Services for the CI/CD deployment of the application and used the AWS SES Service to the users subscribed to the website.

DEVELOPED A STATIC WEBSITES FOR BUSINESS, FAMILY AND FRIENDS

Technology: ReactJS, Firebase, AWS Amplify, AWS SES, Restful API, JavaScript, HTML, CSS, S3

Period: Since Jan 2015 - Until today

- Developed and hosted multiple static websites in AWS Amplify and AWS S3 for family and friends to make their memories last forever. Here are the links to such developed websites
- Developed my portfolio websites using HTML and CSS Bootstrap and curated my passion for development and photography into my photography website during my college days. Here are the links to those websites

CERTIFICATIONS / COURSE – CREDLY LINK

AWS AI Practitioner Course	(2025)
AWS Solutions Architect Associate	(2023)
AWS Sysops Administrator Associate	(2023)
AWS Developer Associate	(2022) - Expired
Azure Fundamentals - AZ 200	(2020)
Lean Six Sigma Green Belt	(2014)
US Health Care	(2012)

EDUCATION

- Bachelor of Engineering in Computer Science (B.E-CSE), Dhanalakshmi Srinivasan Engineering College - Anna University, Tamilnadu, India | March 2011 | 73%
- 12th Grade, Sri Ramakrishna Matriculation Higher Secondary School, Tamilnadu, India | March 2007 | 84%
- 10th Grade, Saraswathi Matriculation School, Kanchipuram, Tamilnadu, India | March 2005 | 77%

REGARDS

Balakumar Velusamy