

<https://www.linkedin.com/in/asokkalidass/>

**Asok Kalidass Kalisamy**

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## PROFILE

An Experienced Full-Stack developer with proven experience in developing secured enterprise-level systems and seeking a collaborative, progressive, and innovative environment with an organization that offers opportunities for personal and professional development.

## HIGHLIGHTS OF QUALIFICATIONS

- Over 8 years of experience in the Software Development industry involving in all phases of the software development life-cycle; analysis to implementation and a Master's degree in Applied Computer Science.
  - Strong working experience in design, development of client (web/windows), and server-based applications.
  - Worked in Agile methodology using Scrum practice (participated in sprint planning, daily stand-ups, sprint retrospectives, etc.)
  - Good Knowledge of OOPS, solid principles, coding standards (SonarQube, ReSharper & ESLint), secure coding techniques, and design patterns like Factory, Strategy, Mediator, etc.
  - Experience in working with WCF Services, Restful web services, XML, XHTML Web Services using SOAP and WSDL following SOA in a distributed environment.
  - Transformed client requirements into technical specifications, Modeling, and developing an application using C#.NET, ASP.NET, WCF, WEB API, MVC, CQRS, MediatR, HTML, JQuery, TypeScript, ES6, CSS, React hooks, Material-UI, SASS, React Router V6, Webpack, GraphQL, .Net Core 3.1, JavaScript, Azure, CI/CD Pipelines, JWT Auth, EF Core, SQL.
  - Implemented TDD (Test-driven development) using NUNIT framework and developed unit tests using Rhino-mocks, MOQ, Jest, and Enzyme.
  - Prepared Technical design document, Use Cases, Test Cases, and User manuals for various projects and good at Root cause analysis, Bug fixing, and Unit & Integration testing.
  - Knowledge of building, deploying, and managing applications using Microsoft Azure, deployment using software containers like Docker.
  - As a value add, developed multiple automation tools (Clarity, SSN Encrypt/Decrypt, MMS TextNow) to aid the team.
  - Working Experience in Python & Core Java
  - MSc, Data Analytics & NLP major, Program Comprehension minor (September 2018).

#### **RELATED EXPERIENCE AND ACCOMPLISHMENTS**

<b>Senior Programmer</b>	<b>Provincial Health Services Authority, Burnaby, BC</b>	<b>May 2020 – Present</b>
<ul style="list-style-type: none"><li>• Created various Data-Sync services (strategy pattern) for data integration using Hangfire.</li><li>• Created the PO header module for the Centralized Back Order Management app.</li><li>• Enhanced Complex data intensive master item management app using CQRS pattern.</li><li>• Created TPL based Restful APIs with code first EF (Generic Repo Pattern) at the backend (multi-tiered pattern).</li><li>• Designed Expression based generic search extension function (.Net Reflection and Expression Trees).</li><li>• Created various Power BI Reports, SQL Scripting and wrote logging and authentication .net core pipelines.</li><li>• Designed the react boilerplate application that has a generic API layer, Reduce &amp; multi-document architecture.</li><li>• Developed multiple generic React hooks components (Grid, Layouts, Lists, Dynamic Forms, and Controls).</li><li>• Written Unit test for UI components (Jest &amp; Enzyme) and Business Layer (MOQ and XUnit).</li><li>• Designed Hot chocolate based GraphQL layer for CURD operations.</li><li>• Actively participated in design discussion and peer code review.</li></ul>		

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<b>Full-Stack Developer</b>	<b>Snipp Interactive, Burnaby, BC</b>	<b>Sep 2018 - Sep 2019</b>
● Designed, developed, and consumed Restful APIs.		
● Created a rewards dashboard using MVC, repository pattern (generic), and UnitOfWork in an N-tiered architecture.		
● Develop front-end components using HTML5, CSS3, Bootstrap and AngularJS.		
● Developed various request pipelines. ( Logging and JWT Auth)		
● Leveraged parallel programming for file processing and MMS queue using producer & consumer pattern that reduces the job execution time by 60%.		
● Created an MMS testing tool for the QA team that eliminates the use of a paid Perfecto subscription (side project).		
<b>Computer Science Intern</b>	<b>Allscripts Healthcare, Richmond, BC</b>	<b>May - Aug 2018</b>
● Developed a password strength meter and tutorials module.		
● Worked with the Syllable.ai team to integrate the chatbot application.		
● Involved in bug fixes and enhancements.		
● Worked with the business for requirement clarifications.		
<b>Associate</b>	<b>Cognizant, Chennai, India</b>	<b>Aug 2011 - Dec 2016</b>
<b>Project: Compliance - Walmart</b>		
● Implemented AGILE development methodology and provided estimates, and participated in weekly grooming meetings, daily & weekly status report to the client on progress of the tasks.		
● Created complex queries, indexes, stored procedures, views, triggers, user defined functions to incorporate the business flow.		
● Designed and developed MVC architecture with WCF binding concepts for making data binding for end points.		
● Written a load balancing logic to call the web service to request for criminal history.		
● Wrote application using Web API to talk to external applications and involved in writing small ASP.NET Web Forms application with VB.NET as programming language.		
● Responsible for Database design, and creation of Stored Procedures, triggers in SQL Server and perform the Data retrieval in SQL Server		
● Participated in various Client meetings with the team and the Project manager to discuss improvements /amendments in the development of the section.		
● Used TPL (Task Parallel Library) for the purpose of scheduling of threads on Thread Pool and state management		
● Created use case diagram, class diagrams and sequence diagrams using Visio.		
● Created SOAP-based web-service to request the candidate's eligibility status.		
● Developed a standalone SSN Encryption/Decryption utility to assist the support team.		
● Constructed the generic file-based logging mechanism using log4net.		
● Written complex SQL scripts to address the incidents.		
● Developed an SSIS package to refresh the prod data in a test environment to ease our support activities.		
● Created several POC's and Design documents for R & D activities.		
<b>Project: WebEDI Re-Architecture - Walmart</b>		
● Involved in application development using C#, SQL Database, LINQ, WCF, Entity Framework and Web API		
● Created the helper class to handle database operations with multiple providers.		
● Worked on creating a rule-based engine to handle multiple EDI documents.		
● Optimized existing SQL queries based on the query plan and analyzer.		
● Developed a JQGrid based complex dashboard with a subgrid that supports CRUD operations.		
● Written a helper class that assists developers in designing a custom PDF using iTextSharp.		
<b>Project: Store Apps - TechMod - Walmart</b>		
● Developed a fail-over mechanism for the Informix server to eliminate windows registries.		

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- Created a common architecture to remediate the group of applications that resulted in 50% increased productivity.
- Constructed a batch processing logic to retrieve the multiple paged document.
- Developed a windows utility that automates the QA testing effort by 90%.
- Developed multi-threaded Windows Service incorporating Task Parallel Library to perform background processing.
- Voluntarily initiated the innovation drive to automate the manual processes.
- Contributed to the development of an Open-Source tool [OneOps](#).

## MACHINE LEARNING PROJECTS [<https://github.com/asok-mirror>]

Project: [Real time credit transaction fraud detection system](#)

- Outline: Build a real-time fraudulent transaction detection system that classifies the transaction based on the PCA transformed European customer transaction details. This end-to-end application is based on the google's MLOps architecture pattern.
- Airflow Pipelines (dataops & mlops): Created a Data pipeline that prepares the data-set for modeling, then triggers the mlops pipeline and serves the model for serving if it's efficient than the previous model.
- Feature Store: Used Feast based store as single point of truth for training and prediction flows. Integrated the incremental data refresh to the online store in the dataops pipeline.
- Hyperparameter Optimization: Used Optuna for hyperparameter optimization, captured the study details in each trials using MLFlow and persisted the best study trials and prams as json.
- Testing: Used Great Expectations to valid the data set on statistical front and created checkpoints to validate it during every data refresh through dataops pipeline. Incorporated Locust to simulate the production traffic.
- Web: Exposed the serving model using FastAPI along with metrics end point and performed api schema validation using Pydantic.
- Monitoring & Alert System: Developed Prometheus based solution for continuous model monitoring and triggers alert if model accuracy decreases over time. Wrote custom Grafana dashboard for real time monitoring.
- Model Decay: Used alibi-detect and pickled the reference planes and then used it for outlier and drift detection. Explored the the A/B testing through iter8 and deployed the solution using Kubernetes.

## EDUCATION

**Master's in Applied Computer Science, Dalhousie University, Halifax, GPA: 3.84**  
*NLP, Data Analytics & Data Warehousing*

**2017-2018**

**Bachelor's in Engineering, Anna University, India, GPA: 4**  
*Robotics, Embedded Systems & Virtual Instrumentation*

**2007 -2011**

## EXTRACURRICULAR ACTIVITIES

**Chennai Tree Bank, member**  
Lake cleaning, seed collection & preparation, and plantation

**2009 – 2011**

**Neighborhood House, volunteer**  
Computer education for seniors and other community activities

**Feb 2020 - present**

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