

# Shanmugar Rathinasamy Mariappan

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## SUMMARY:

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- Experienced, Certified AWS Developer Associate, who is also knowledgeable and quality driven Software Engineer with over 10+ years of track-record in all phases of Software Development Life Cycle as well as agile environment.
- Primarily seeking to contribute and acquire technical skills in various cutting-edge technologies. Ability to perform well in team as well as motivated problem solver aspiring to improve user experience.

## EDUCATION:

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### Master of Science, Computer Science

August 2015-August 2016

University at Albany, State University of New York, USA, GPA: 3.9/4.0

### Bachelor of Engineering, Computer Science and Engineering

August 2006-April 2010

Anna University, Chennai, India, GPA: 3.5/4.0

## CERTIFICATIONS:

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- AWS Certified Developer Associate – August 2021
- CJIS Certified (Criminal Justice Information System) – January 2020
- LOMA 280 – June 2015

## TECHNICAL SKILLS:

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- **Languages:** C#, React, Angular, VB .net, Java, JavaScript, TypeScript, C, C++, Python, HTML / CSS, Cobol, REXX, JCL, Machine Language (SML)
- **Virtualization/Cloud:** Kubernetes, AWS, Docker, HELM, RabbitMQ, Redis, Nginx, Kibana, Grafana, Prometheus
- **Databases:** MS SQL Server, MongoDB, IBM DB2, MySQL, PostgreSQL
- **Full Text Search:** SOLR, Elastic Search
- **Operating Systems:** Windows, Linux, z/OS.
- **Other Technologies:** Razor, CSHTML, jQuery, LINQ, JSP, Hangfire, Assembla, IIS, Apache tomcat, XML, JSON, YAML, LESS, Bootstrap, Bash/shell, WordPress, MediaWiki, Postman, Visual Studio, VS Code, Eclipse, IBM Visual Age, IBM MQ Visio, SOAP UI, WCF, google analytics
- **Frameworks:** Entity Framework, EF code first, MVC Framework
- **Version Controls:** SVN, GitHub, Endeavor, Source gear vault

## EXPERIENCE:

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### Application Developer, New York Prosecutors Training Institute, Albany

Sep 2016–Present

- Designed and developed multiple web applications as a full stack developer currently used by prosecutors spread across all the District Attorney Offices in New York.
- Acquired and demonstrated knowledge on container technology, AWS cloud and its management as well as dockerization of legacy applications. Migrated the environment from docker swarm to AWS EKS infrastructure with different node types and integrated the deployment with HELM.
- Created bridge for external application - Axon (Body worn camera - evidence.com) so that BWC videos can be streamed from Axon without making a copy of the file thus saving the storage cost.
- Involved in the development of updating the UI from angular to react for better performance and usability. Implemented FormOCR system which would scan a PDF arrest report and capture all the information to create the case so that the user need not manually input the information.

### Key Achievements

- Programmed and audited on all the files in the system - S3 buckets (~300 TB of data / ~35 million files) using C# async, multithreading technologies and exceptional backoff so that AWS S3 APIs are not throttled.
- CJIS compliance, restructured the system so that its FIPS 140-2 compliant and moved all the S3 data and Kubernetes cluster from AWS Commercial to AWS GovCloud environment and implemented S3 server-side encryption.

- Updated transcode FFMPEG process to use EC2 GPU instances so that transcode could run faster. Implemented S3 glacier and S3 glacier deep archive storage and migration of the files with S3 Life Cycle Policy.
- Updated the system to support complete Live webinar course using Kaltura Newrow platform by integrating with their API.
- Integrated several APIs of different arresting agencies (NYPD, NYSP) for electronic transfer of arrest / case information.
- Created a new website from ground-up that had full text search ability as well as performance to process over 1.5 million of backlogs and indexed them in SOLR to provide reliable results and facets.
- Worked on multiple critical projects, some of which have been listed below:
  - **DEMS (Digital Evidence Management System)** – Evidence system used by several District Attorney Offices in NY; A queue-based system built with several microservices for file processing.
  - **PCMS (Prosecutor's Case Management System)** – Case management system with feeds from Office of Court Administration, Department of Corrections and Community Supervision and different Law Enforcement Agencies in NY.
  - **NYPTI Law: (<https://www.nypti.org/law>)** – Publicly available legal materials for learning & research for Prosecutors in NY such as decisions, motions, statutes, sentence calculation tool, bills recently introduced & passed in Assembly & Senate.
  - **CLE Online (Continuing Legal Education)** – All attorneys who are actively practicing law in NY should earn CLE credits every year. This application provides On-demand training videos for credit to all attorneys working for DA offices.
  - **Prosecutor's Encyclopedia** - An online collaborative resource for Prosecutors containing briefs, case law, expert witness information, transcripts, videos, and more. With more than 10,000+ prosecutors all over US.

#### Senior Software Engineer, HCL Technologies, India

Aug 2010–Jul 2015

- Developed multiple web applications for Banking and Insurance clients where Mainframe was mostly used, have implemented many Government regulations in the client systems which influenced to do LOMA 280 certification to understand the insurance system well.
- Coordinated multiple offshore teams for over a year from the client location (Bristol, UK) acting as the SME handling liaison operations as well as got involved in requirement gathering and user queries. Delivered several value-added services by automating the redundant tasks.
- As part of the Scotland Act updated the system to handle / differentiate Scotland taxpayers and do future proof for Wales and England. Attended the client calls by participating as SME of the track, evaluate the do-ability of the project within the time frame, design and guided the development in an effective way.
- Got involved from the application-level design of the new interfaces, developed and tested new interfaces.
- Worked on multiple critical projects, some of which have been listed below:
  - **Scotland Act** – The system was updated to handle / differentiate Scotland taxpayers and to future proof for Wales and England taxpayers.
  - **FATCA (Foreign Account Tax Compliance Act)** – Updated the system to track the investment / payments made by all foreign nationals in UK as a part of the government compliance.
  - **RDR (Retail Distribution Review)** – with regards to new government regulation system was modified to change the way in which financial advice operated in the UK.

#### Master of Science, Computer Science, University at Albany State University of NY

Aug 2015–Aug 2016

- For cryptography course project, merged two important concepts of the cryptography – Steganography and Group Authentication by creating an authentication application using steganography image where the password is embedded in a image during registration, the image will be used during login and a group login in which if both the person of the group login then only the user can login into the system and if any one user logs out of the system the other user is forcefully logged out of the system.
- In pursuance of Software Engineering course project, developed a department website. With student, staff and faculty login with many features like Add Resource, Book Resource, Cancel Resource, List Courses, Add Courses, Create Exams, register to exams, Update Marks, Discussion Board, Make Announcements, Update PhD Student Status, View Alumni Information, Update profile. The development was done with Java, JSP, MVC framework and deployed in AWS.