

SHANMUGAR  
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Full Stack Application Developer

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## SUMMARY:

Experienced, knowledgeable and Driven Software Engineer with over 10+ years of track-record in all phases of Software Development Life Cycle. Seeks to contribute my acquired skills in various cutting-edge technologies, ability to perform well in a team and problem solving to improve user experience for clients, employees, and administration.

## KEY SKILLS:

**Software Development | CJIS (Criminal Justice Information System) Certified | Container Technology & Management |**  
**API Development | 3rd Party API integration | AWS | async & multithreading | LOMA 280 Certified**

## TECHNICAL SKILLS:

- **Languages:** C#, Angular, React, VB .net, PHP, 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, z/OS, Linux
- **Other Technologies:** Razor, CSHTML, jQuery, LINQ, JSP, Hangfire, Assembla, IIS, Apache tomcat, XML, JSON, YAML, LESS, Bootstrap, Bash/shell, WordPress, MediaWiki, Postman, Visual Studio, Eclipse, IBM Visual Age, IBM MQ Visio, SOAP UI, WCF, google analytics
- **Frameworks:** Entity Framework, EF code first, MVC Framework
- **Version Controls:** SVN, GitHub, Endevor, Source gear vault

## PROFESSIONAL EXPERIENCE

### Application Developer,

New York Prosecutors Training Institute, Albany

Sep 2016–Present

- Designed and developed many web sites which are used by prosecutors in most of the District Attorney Offices in New York.
- Acquired and demonstrated knowledge on container technology, cloud and its management, AWS.
- Involved in hiring / training of fellow employees / intern.
- Created a new website from scratch which has full text search ability by processing through more than 1 Million files which were indexed in SOLR and provides reliable results and facets.

### Senior Software Engineer, HCL Technologies, India

Aug 2010–Jul 2015

- Developed many web applications for Banking and Insurance clients where Mainframe is mostly used, have implemented many Government regulations in the client systems which triggered me to do LOMA 280 certification to understand the insurance system well.
- Coordinated the offshore team for a year from the client location (Bristol, UK).
- Delivered many value-added services by automating the repeated tasks.

## PROFESSIONAL PROJECTS

### DEMS (Digital Evidence Management System):

- Worked on several enhancements / design on queue-based system, process EXIF data from Image and Video, better user reporting, better MQ management.
- Involved in updating the UI from angular to react for better performance and usability.
- Enhanced and customized the Kubernetes cluster (pods, nodes) using the calculated results from AWS CloudWatch and Prometheus data.
- Implemented OCR by remodeling few open source projects and new routines, as DEMS for Prosecutors there would be lot of huge, scanned PDFs which needs to be OCR'd to make it searchable. Engineered the new system so that it would yield better cost management.
- Programmed and audited on all the files in the DEMS system (~200 TB of data / ~25 million files) using C# async and multithreading technologies.
- The data would be CJIS, restructured the system so that its FIPS 140-2 compliant and moved all the data, cluster to AWS GovCloud.

**Tools Used:** C# .net core, Python, Angular, React, TypeScript, Kubernetes, AWS, Docker, HELM, RabbitMQ, Redis, Nginx, Kibana, Grafana, Prometheus, MS SQL Server, Elastic Search, Linux, LINQ, JSON, YAML, Bash / Shell, Postman, Visual Studio, EF Code First, GitHub

### PCMS (Prosecutor's Case Management System):

- Worked on several enhancements / streamlined including user feature requests, identification, victim tracking assistance.
- Implemented FormOCR system which would scan an arrest report and capture all the information to create the case so that user need not type the information.
- Analyzed and improved the matching logic on existing case in the system for create / update from Office of Court Administration feed.
- Involved in Document management system / eDiscovery and a proposal to add levels of AI using data mining techniques and index most of the object's in the videos using OpenCV for better analysis for the prosecutors.
- Educated and Informed end user on trouble shooting and other issues.
- Integrated several APIs of different arresting agency for electronic transfer of arrest / case information.

**Tools Used:** C# .net framework, JavaScript, HTML/CSS, AWS, MS SQL Server, SOLR, Windows, Linux, Razor, CSHTML, jQuery, LINQ, Assembla, IIS, XML, JSON, YAML, LESS, Bootstrap, Bash/shell, Postman, Visual Studio, google analytics, Entity Framework, MVC Framework, SVN, SOAP UI

### **Public Decisions:**

- New York courts release the softcopy of the decisions / motions daily in a secured location. This project was about to fetch those records, process it so that a full-text search can be performed on those processed records and displays records in a reasonable way with facets.
- The website was made from the scratch, there was a backlog of over a million files (from the year 2000) of different formats – zip, wpd, pdf, html which were processed.
- The files could have a typo correction – Thus almost a similar document could be processed again. To handle that Implemented Levenstein distance algorithm to do a comparison for checking the similarity of the documents.
- Made the search to be done from additional resources like YouTube (Court Channel), Free Law Project - Recap documents using their APIs.

**Tools Used:** C# .net framework, HTML / CSS, JavaScript, jQuery, AWS, MS SQL Server, SOLR, Linux, Razor, CSHTML, LINQ, Hangfire, Assembla, IIS, JSON, Bootstrap, Bash/shell, Visual Studio, Postman, google analytics, Entity Framework, MVC framework, SVN.

### **CLE (Continuing Legal Education):**

- Worked on several enhancements to the base application so prosecuting attorney in New York state can earn CLE credits through NYPTI's online system and track their progress.
- Process new certificate formats as the per the CLE board and handle new category.
- Made update to tracking logic of video presentations to ensure the user is online and active.

**Tools Used:** VB.net, MS SQL Server, jQuery, CSS, Bootstrap, Assembla, SVN, Kaltura, IIS, AWS.

### **NYPTI LAW:**

- Developed and formulated group of websites which provides various study / references materials for the Prosecutor's.
- Capitalized on the user of cache for better performance and admin page so that concerned departments can update the resources accordingly without depending on the IT.

**Tools Used:** C# .net framework, HTML / CSS, JavaScript, jQuery, AWS, MS SQL Server, SOLR, Linux, Razor, CSHTML, LINQ, Hangfire, Assembla, IIS, JSON, Bootstrap, Bash/shell, Visual Studio, Postman, google analytics, Entity Framework, MVC framework, SVN.

### **Scotland Act:**

- 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.

**Tools Used:** C#, MS SQL Server, jQuery, CSS, Bootstrap, MVC Framework, Entity Framework, Assembla, SVN, Small talk V6, Mainframe (Cobol, DB2), Endeavor, Source gear vault, z/OS.

### **Foreign Account Tax Compliance Act - FATCA:**

- The project was to track the investment / payments made by all foreign nationals in UK.
- Got involved from the low-level design of the new interfaces, developed, and tested one of the two new interfaces. It was a challenging project with varying requirements, close deadlines.

**Tools Used:** C#, MS SQL Server, jQuery, CSS, Bootstrap, MVC Framework, Entity Framework, Assembla, Mainframe (Cobol, DB2), Endeavor, Source gear vault, z/OS.

### **Retail Distribution Review - RDR:**

- Enhanced the screens, updated many more interfaces to other front ends / batch and client correspondence to differentiate the new RDR product from the previous products and commission details of the financial intermediaries and setting up the new product.

**Tools Used:** C#, MS SQL Server, jQuery, CSS, Bootstrap, Assembla, SVN, Small talk V6, Mainframe (Cobol, DB2), Endeavor, Source gear vault, z/OS.

## **EDUCATION:**

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### **Master of Science, Computer Science**

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

August 2015-August 2016

### **Bachelor of Engineering, Computer Science and Engineering**

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

August 2006-April 2010