SAISUNIL SRIDHARAN

Software Engineer | Expertise in PKI, IAM, Cyber Security, R&D.

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About

A visionary programmer, I merge expertise and innovation to transform tech and business, aspiring for excellence and impactful career advancements.

Skills

Tech stack

Programming Language: Java, Python.

Databases: PostgreSQL, MySQL, Oracle 21c, Redis.

Framework: Spring Boot 3, Angular 18, JavaFX.

Cloud: Azure [DevOps, IAMs], AWS [HMS, Ec2, S3, CloudFormation, Elastic Beanstalk].

Architectural pattern: MVC [JSP, J2EE], Microservices [API (Rest API, SOAP)].

Build and Tools: Maven, Gradle, ELK, Docker, Tomcat, Netty, Nginx.

Hands-on Worked Technologies

AD [LDAP], XML, WSDL, JSON, SAML 2.0, OpenID, JWT, OAuth 2.0, PAM, IAM, IGA, Unit testing, Hibernate, Computer Networking, SDLC, CI/CD, Linux, SSL/X.509 Certificate/Keystores, HSM, OpenSSL, CBOR, Post-quantum cryptography (PQC), Agile Project Management, security information and event management (SIEM).

Soft Skills

Teamwork, Problem Solving and communication.

Area of Interest

Software Development, Cyber Security, Blockchain, Project Management.

Experience

Emudhra, Bangalore   [3 - year 6 months] June 2022 - Present
Software Engineer

• Emudhra is a Certifying Authority (CA). That company provides PKI solutions (PKIaaS) products like Digital Signatures, Digital certificates, Identity Management Systems.

• I am a Software Engineer at Emudhra Pvt Ltd. Solving Public key infrastructure (PKI) problems and implementing cryptography. I have developed multiple applications from scratch system designing to product deliver. The product to Solve PKI problems for Government and Private organizations

• Product worked: CA (Private CA), TSA, OCSP, NPKD, SPOC, TCC, V2X Security (CERT), mDL.

Education

Bachelor of Engineering Computer Science and Engineering.   Aug 2018 - April 2021

Ganadipathy Tulsi's Jain Engineering College Affiliated to Anna University, Vellore 632058.

Diploma in Engineering Computer Engineering.   June 2015 - April 2018

Sri Venkateswara Polytechnic College Vellore. Affiliated to the Department of Technical Education, Government of Tamil Nadu, Vellore 632058.

Product and Projects

eMCP (emudhra Model Context Protocol)

Engineered the eMCP application with Java 21, Spring Boot, and Spring AI to establish a Model Context Protocol, enabling intelligent and seamless data communication with EMCA and related services

mDL (mobile driver license)

Engineered a cutting-edge mobile driver's license application leveraging Java 21 and Spring Boot, incorporating RESTful APIs within an Angular 17 framework. Implemented advanced data serialization methods such as CBOR, JSON, and XML to optimize system interoperability and performance. This innovative solution significantly improved the efficiency and user experience of digital identification systems.

emCA Private CA (PKIaaS)

As a key contributor to emCA, a leading digital certificate management solution, I played a pivotal role in enhancing security and ensuring compliance with industry standards. My expertise facilitated the successful migration to JDK 17 and the integration of Single Sign-On (SSO) using SAML and LDAP DSA, accounting for 60% of the code changes. This initiative significantly bolstered the robustness of our PKI infrastructure, incorporating features such as OCSP, timestamping, and extensive protocol support.

nPKD (National Public Key Directory)

Developed the National Public Key Directory (NPKD) to interface with the ICAO PKD, enabling secure exchange and LDAP service publication of ePassport authentication data. Implemented schedulers for automated maintenance and a web GUI for manual operations, ensuring continuous availability of valid PKD objects for inspection systems. Specialized in managing security data, including certificates, CRLs, and Master Lists, adhering to ICAO standards.

SecurePass (identity management system) (IAM)

Contributed to the migration and enhancement of the identity management system, upgrading from Java 8 to Java 17. This involved restructuring and fortifying the system's architecture and security protocols. My role was pivotal in optimizing performance and ensuring robust, secure system operations.

Speech to Scenario Simulation Using NLP And Deep Learning

Designed and implemented a user interface for speech-to-scenario simulation applications, utilizing natural language processing and deep learning techniques. The system features a voice-to-simulation generator that serves as a tool for educational and research advancements. Proficient in Python 3, PyGame, and TensorFlow, I contributed to the development of a platform that translates vocal inputs into dynamic simulations.

Certificate and Courses

Atlassian Agile Project Management Professional Certificate
Certificate issued by LinkedIn and Atlassian.
LFD121: Developing Secure Software
Certificate issued by The Linux Foundation.
ISO/IEC 42001:2023 - Artificial Intelligence Management System (AIMS)
Certificate issued by Alison.
CompTIA Security+
Certificate issued by cybrary.it.