

MANIKANDAN SRITHARAN

Software Engineer | Java | C++ | Python | AI & ML

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<https://github.com/msritharan> Bangalore, India

SKILLS

Java · Spring Boot · Hibernate · PostgreSQL · MySQL · SQL · Redis · AWS S3 · AWS EC2 · AWS RDS · Terraform · Helm · Spinnaker · Kubernetes · Docker · Git · JUnit · Mockito · RESTful APIs · Unit Testing · Microservices · Distributed Systems · Databases · C++ · Python · PyTorch · TensorFlow · NumPy · Pandas

KEY ACHIEVEMENTS

- All India Rank 714 in JEE Advanced 2019
- All India Rank 1210 in JEE Mains 2019
- Awarded the KVPY SX scholarship by the Government of India

LANGUAGES

English	Proficient	<div><div style="width: 90%;"></div></div>
Tamil	Native	<div><div style="width: 100%;"></div></div>
Hindi	Advanced	<div><div style="width: 85%;"></div></div>
Mandarin	Beginner	<div><div style="width: 20%;"></div></div>

EXPERIENCE

-  Associate Member of Technical Staff 07/2024 - Present
Salesforce Bangalore, India

 - Collaborated with a **team of 14 engineers** to design, develop, and maintain a Java Spring Boot backend that crawls, scans, and publishes third-party container vulnerability data, enabling centralized insight for teams to detect and address security risks across the organization.
 - Designed and implemented a migration from the existing architecture to an upgraded architecture, improving the E2E latency of the 3PP vulnerability scanning workflow of the production AWS ECR inventory (**~70k images**) from ~24 hours to ~8 hours (**66% reduction**).
 - Designed and executed a configuration-driven refactor of the codebase, enabling self-service onboarding resulting in **significant CTS savings**.
 - Assisted the team in exiting the company-wide moratorium by implementing the required safe change standards which include Managed Releases, **100% FIT Trust Check**, Argo Rollouts and **>80% code coverage**.
-  Software Engineering Intern 05/2023 - 07/2023
Salesforce Bangalore, India

 - Developed an **abstraction layer** that standardizes the tool-level results, greatly simplifying the process of onboarding new scan tools and the maintainability of the codebase.
 - The entire system was designed to be driven by a configuration file, making it more general and reusable.
 - Secured a Full Time Return Offer post the successful completion of the internship.
-  Summer Analog Design Intern 05/2022 - 07/2022
Texas Instruments Bangalore, India

 - Developed Novel Calibration Algorithms for the SAR ADC (Successive Approximation Register Analog to Digital Converters) in MATLAB.
 - Implemented hybrid Digital-Analog Calibration Logic to optimize the size and speed of the ADC while satisfying performance benchmarks.

EDUCATION

-  Dual Degree (B.Tech + M.Tech), Electrical Engineering 07/2019 - 06/2024
Indian Institute of Technology Madras Chennai, India

 - Awarded a **Minor in Artificial Intelligence and Machine Learning**.
 - Worked on research projects with **AI4Bharat** involving Automatic Speech Recognition (ASR), pseudo-labelling, and data augmentation, with a focus on low-resource Indic languages.
 - Held multiple **Positions of Responsibility** in the **Placement and Internship Cell** and **Shaastra – the Annual Technical Fest**.

GPA | **8.69** / 10

TECHNICAL PROJECTS

Query Based Search Engine on Document Corpus

IIT Madras

- Built an information retrieval system from scratch to perform query matching on a niche dataset of documents using vector space model.
- Implemented and compared a range of algorithms like Latent Semantic Analysis, Word2Vec and BERT embeddings.

Transliteration Between Indic Languages

IIT Madras

- Implemented a recurrent neural network to perform transliteration between Indic languages (Devanagari Scripts) and tuned hyperparameters.
- Analyzed the performance of various models such as vanilla RNN, GRU and LSTM and implemented attention networks to overcome the limitations.

Dense Depth Reconstruction and Image Processing

IIT Madras

- Implemented an algorithm for 3D dense depth reconstruction from a sequence of images captured using a calibrated smartphone camera.
- Performed image processing tasks such as Canny edge detection, hybrid image creation and panoramic stitching.