

# Mohammad Abdul Mannan

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## EXPERIENCE

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### Senior Software Developer

*KareXpert Technologies*

*September 2021 - Present*

- Led the development and implementation of more than 50 software integration projects in 15 modules, including ERP solutions, diagnostic labs, EMR systems, payments, and TPA vendors, currently used by over 30 clients.
- Developed and maintained an interoperability integration engine capable of integrating third party software with proprietary backend software via UI based configuration, cutting down development time by over 80%.
- Spearheaded the design and development of a FHIR based hospital information exchange and used it to integrate the insurance systems of over 20 healthcare providers across 3 different insurance platforms.
- Assisted in CI/CD pipeline integration using Docker, Jenkins and GitLab CI, contributing to the automation of testing and deployment processes. Provided on-hand maintenance for over 30 clients.

**Skills and tools :** Java, Spring, REST, MongoDB, Node.js, Kubernetes, Angular, HL7 FHIR, AWS S3, Kafka, Jenkins

### Junior Software Developer

*Analinear Imaging solutions*

*March 2020 - December 2020*

- Developed and maintained the backend code base in custom embedded products for more than a dozen imaging products that provide real-time media streaming services with custom modifications.
- Leveraged NVIDIA Jetson Nano GPU acceleration to implement real-time deep learning capabilities such as object detection, semantic segmentation, image classification and neural network optimization.
- Developed over 20 custom features in the proprietary products including custom video overlays, manual audio control, multi-threaded streaming and real time status dashboards based on personalized client requests.

**Skills and tools :** C++, Python, OpenCV, PyTorch, TensorFlow, Gstreamer, Bash

## PROJECTS

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- A privacy-preserving Alzheimer's prediction model using Federated Learning on MRI data, using Flower and Opacus to ensure secure aggregation and differential privacy, ensuring HIPAA/GDPR compliance.
- Implemented optimization algorithms under a research advisor to develop a design comparator using HSPICE that compares differences in performance factors of logic devices such as time delay and power leakage.
- A multimodal SEO optimization model for e-commerce product categorization using descriptions and images.
- An AI based movie recommendation trained on data directly web scraped from movie rating websites.

## EDUCATION

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### International Institute of Information Technology

*Bachelor of Technology in Electronics and Communication*

**Hyderabad, Telangana**

*May 2021*

### University of South Florida

*Masters in AI and Business Analytics*

**Tampa, Florida**

*May 2026*

## SKILLS

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**Languages :** Python, Java, Node.js, TypeScript, C++

**Frameworks :** Spring, FastAPI, Angular, Flower, GStreamer

**Libraries :** React, PyTorch, TensorFlow, OpenCV, Opacus, Hapi, Jackson

**Databases :** MySQL, MongoDB

**Tools :** Kafka, Git, Jenkins, Kubernetes, Docker, Grafana, Selenium, AWS S3, AWS Lambda

**Other :** REST, SOAP, HL7, FHIR