

# MUTHUKUMARAN K

AWS Certified | Aspiring Cloud & AI/ML Specialist

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## EDUCATION

KPR Institute of Engineering and Technology | 2022-2026

B.Tech Artificial Intelligence and Data Science - 8.0 GPA

## TECHNICAL SKILLS

- **Programming Languages** : Java, Python, Basic C, Basic R, HTML, CSS, JavaScript.
- **Data Science & Analytics** : Pandas, NumPy, Matplotlib, Seaborn, Streamlit.
- **Machine Learning & Deep Learning** : TensorFlow, Scikit-Learn, CNN, LSTM, ComputerVision, LangChain, BERT, Transformers, RAG (Retrieval-Augmented Generation).
- **NLP & Retrieval Systems** : Hugging Face, RAG, BERT, ElasticSearch.
- **Cloud Computing** : Amazon Web Services (AWS - EC2, S3, Lambda, SageMaker...).
- **Database Management** : MySQL, Oracle SQL, Mongo DB.
- **Tools & Technologies** : AWS, VMware, Linux, Docker, Git, Github, Google Colab.

## PROJECTS

### Automated Image Resizing and Transfer System Using AWS

- Designed a serverless AWS architecture using S3, Lambda, and SNS to automate image processing and storage, improving efficiency and reducing manual work.

### Farmer's AI Chatbot

- Developed an AI chatbot for farmers, providing market prices, pest control, and fertilizer recommendations using OpenRouter AI models for intelligent query classification. Built with Flask, LangChain, JavaScript, and Pandas for real-time, region-specific insights.

### Resume Parser with OpenAI & LangChain

- Built a high-performance pipeline to extract structured candidate data from .pdf and .docx resumes using GPT models and LangChain. Supports schema validation, multi-threaded execution, and

### Multilingual AI-Based Legal Document Analyzer

- Built a RAG-based system to analyze and summarize legal documents in multiple languages. Enabled semantic search, context-aware responses, and multilingual query support.

## INTERNSHIP / WORK EXPERIENCE

### ONE DATA SOFTWARE SOLUTIONS | Cloud Computing using AWS Intern

DURATION : 3 WEEKS

- Foundation in cloud computing with hands-on experience from a 3-week internship at One Data Software Solutions, focusing on AWS infrastructure management.

### CODTECH IT SOLUTIONS | Cloud Computing using AWS Intern

DURATION : 4 WEEKS

- Deployed web applications using AWS EC2, S3, and Lambda. Built ML pipelines with SageMaker and explored real-time hosting and scaling strategies.

## CERTIFICATIONS

- AWS Certified Cloud Practitioner – AWS
- Data Acquisition - Nasscom
- Introduction to Industry 4.0 and Industrial Internet of Things - NPTEL
- Introduction to MongoDB - MongoDB
- Linux Fundamentals - Coursera

## CO-CURRICULAR ACTIVITIES

### AWS APAC Solutions Architecture Role :

**Key Contributions:** Designed scalable hosting architecture, communicated technical concepts to clients.

- **Amazon ML Challenge** : Successfully completed a 3-day virtual hackathon, tackling product attribute extraction from images using machine learning techniques.