



NITHIYANANDHAM R

DATA & AI ENGINEER

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🐙 <https://github.com/nithiyanandham12>

Portfolio: <https://nithiyanandham12.github.io/Nithiyanandham.R-Portfolio/>

PROFESSIONAL SUMMARY

Proactive and results-driven Data & AI Engineer with 1+ year of experience delivering real-time POCs and client-ready AI solutions. Skilled in leveraging Python, IBM Watson tools (Assistant, Watsonx.ai, Discovery), AI agents, and watsonx orchestrate, alongside Hugging Face NLP, Streamlit, and expertise in API integration, to build cutting-edge applications. Demonstrated leadership as a team leader, managing cross-functional teams to ensure timely delivery of high-quality projects. Adept at solving real-world problems with innovative AI-driven automation and enhancing client business outcomes.

TECHNICAL SKILLS

- Programming Languages: Python, R
- Machine Learning Tools: TensorFlow, Scikit-learn, Hugging Face
- AI Tools: IBM Watsonx.ai, IBM Watson Discovery, Watsonx Orchestrate, Watson Assistant, Hugging Face Transformers
- Document Processing: IBM Datacap
- Data Visualization: Tableau
- Database Management: PostgreSQL
- Other Skills: Deep Learning, API Integration, Cognos Analytics, Natural Language Processing (NLP)

WORK EXPERIENCE

Team Lead - Data & AI Engineer

SBA Info Solutions, Chennai

January 2024 – Present

- Successfully led diverse teams to deliver real-time POCs and client-ready AI projects, consistently meeting deadlines and quality standards.
- Designed and deployed Generative AI chatbots and voice bots using IBM Watson Assistant, handling over 1,000 daily queries and improving customer response times by 50%.
- Developed and integrated sophisticated AI agents to automate complex workflows and enhance operational efficiency.
- Collaborated with clients to gather requirements and translate them into actionable AI solutions, ensuring alignment with business goals.
- Built and deployed custom AI models with Watsonx.ai for predictive analytics, boosting forecasting accuracy by 25%.
- Developed and delivered Streamlit dashboards to visualize client data, enhancing decision-making processes.
- Automated document extraction and indexing workflows using IBM Datacap and Watson Discovery, increasing processing efficiency by 40%.

Artificial Intelligence Intern

Imagecon India Pvt

January 2023 – January 2024

- Contributed to the development and deployment of machine learning projects for image classification and text analytics, achieving over 90% accuracy on deliverables.
- Built Python-based GUI applications using Tkinter, including data entry tools and task management systems.
- Collaborated with senior engineers to design and implement NLP solutions for text classification and sentiment analysis using Hugging Face Transformers.
- Developed a deep learning image classification project using CNNs, achieving high accuracy on test data.
- Supported team efforts in debugging and optimizing project pipelines to ensure smooth deployment.

EDUCATION

BACHELOR OF ENGINEERING IN COMPUTER SCIENCE

Mahendra Engineering College

CGPA:7.06

BATCH:2016-2020

PROJECTS

Document Processing Automation

- Developed an end-to-end automated workflow for document processing using IBM Datacap and OCR solutions for data extraction and indexing.
- Tools: Python, IBM Datacap, OCR | Reduced processing time by 40% and enhanced accuracy in data extraction.

PROJECTS

Generative AI Chatbots

- Designed and deployed multiple Generative AI chatbots using IBM Watson Assistant for various industries, automating FAQs and improving customer experience.
- Achieved a 35% reduction in operational costs while handling high query volumes.

Video Streaming Platform with Content Analytics

- Built a video streaming platform integrating transcription, summarization, and semantic search capabilities.
- Enabled users to search videos by meaningful content rather than keywords, improving content discovery efficiency by 50%.
- Tools: Python, Watson Discovery, Watsonx.ai, Hugging Face, Flask

OCR Solutions for Document Digitization

- Developed an OCR pipeline to digitize documents and extract structured data for an enterprise client.
- Tools: Datacap, Python | Improved data entry efficiency by 30%.

Entity Extraction and Indexing

- Automated entity extraction and indexing for legal documents using Watson Discovery, streamlining search and retrieval.
- Tools: Python, IBM Watson Discovery | Enhanced data retrieval speed by 40%.

Legal Document Analysis

- Developed a hybrid AI solution supporting Indian regional languages and utilizing advanced document analysis and section-wise prompting for enhanced data extraction accuracy.
- Implemented a robust QC workflow for reviewing extracted output and flagging low-quality documents, with integrated pre-built forms within the QC section for manual data capture, and enabling report management.

Image Classification with CNN (Internship)

- Developed a deep learning model for multi-class image classification using TensorFlow, achieving 94% validation accuracy.

GUI Tools for Task Management (Internship)

- Created Tkinter-based GUI tools, including a to-do list application and a data entry form, improving internal workflows.

CERTIFICATION

- IBM Watson Assistant Badge – IBM
- IBM Watson Discovery Badge – IBM
- IBM Watsonx.ai Badge – IBM
- IBM Cognos Analytics Badge – IBM
- IBM Planning Analytics Badge – IBM
- MLOps Foundations Badge – IBM
- Instana Application Performance Monitoring Badge – IBM
- Artificial Intelligence using Python – Imagecon Academy
- The Fundamentals of Digital Marketing – Google Digital Unlock
- Python Fundamentals – Great Learning
- Python Proficiency Certificate – MIMO App