

RITESH RAJ

AI Automation Engineer | AI Video & Animation Producer

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PROFESSIONAL SUMMARY

AI Automation Engineer and AI-driven Video & Animation Producer with 6+ years of freelance experience spanning narrative-driven AI video production for independent artists and, more recently, end-to-end AI automation pipelines. Built production-grade automation systems using n8n, Make.com, FastAPI, and Docker, and delivered 100+ animated music videos by combining generative AI pipelines (ComfyUI, Stable Diffusion, Kling, Runway) with traditional post-production in Premiere Pro and After Effects. Electronics & Communication Engineering background with a fast, self-directed learning style that supports rapid adoption of new AI tools and full ownership from concept through final delivery.

SKILLS

Automation & AI Engineering: Automation Architecture, AI Workflow Design (n8n, Make.com), API Integration, FastAPI & Docker, Web Scraping & Data Extraction, Process Optimization, Rapid System Prototyping

AI Agent & Data Engineering: AI Agent Development, Retrieval-Augmented Generation (RAG), Vector Databases (Supabase/pgvector), PostgreSQL, Airtable Automation, Prompt Engineering, Cloud Deployment (Docker, Cloud Run, GCS), SaaS & End-to-End Automation Architecture

AI Video & Creative Production: AI Video Generation (Kling, Runway), ComfyUI & Stable Diffusion Pipelines, Prompting & Visual Consistency Techniques, Premiere Pro & After Effects, Motion Graphics & Color Correction, Music Video Direction & Animation

EXPERIENCE

Independent / Freelance — AI Video & Animation Producer

2018 – Present

- Produced 100+ animated AI-generated music videos for independent artists, owning the full pipeline from concept and prompting through generation, editing, and final delivery.
- Delivered a complete music video catalog for independent artist Wele Moyne Alexander, including the singles “Insecurities,” “Day Dreaming,” and “Chasing Time,” published on the artist’s official website.
- Combined generative AI tools (ComfyUI, Stable Diffusion, Kling, Runway) with traditional editing in Premiere Pro and After Effects to deliver narrative-driven, broadcast-ready visuals.
- Maintained consistent character appearance and scene continuity across multi-scene narratives using prompting, batching, and post-processing techniques.

Independent / Freelance — AI Automation Engineer

2022 – Present

- Built a fully automated AI video generation pipeline that converts a topic into a complete video — research, scripting, image generation, voiceover, captions, and assembly — reducing manual production effort by 80%+.
- Designed and delivered a SaaS automation tool for a client, built independently in collaboration with Rex Automation, that uses AI to generate YouTube video transcripts and automatically publish videos end-to-end.
- Developed a personalized children’s book automation platform connecting web forms, an Airtable database, AI image generation, and media processing, with a built-in preview/approval workflow.
- Built an academic research automation system that searches academic sources, extracts relevant sections, and converts complex content into simplified scripts, using custom FastAPI scraping services in Docker.
- Built and integrated custom scraping APIs (FastAPI + Docker) into n8n pipelines for structured data extraction and research workflows.

- Founded an AI automation studio building custom “smart business tools,” including a Faceless Content Engine that converts a spoken idea directly into a captioned, published video for YouTube and Instagram.
- Designed and delivered AI agent systems, no-code CRM setups, and client onboarding automations for solo founders and small businesses.

KEY PROJECTS

1. Academic Research Automation Platform

- Designed and developed an AI-powered academic research automation platform using n8n, FastAPI, Docker, Airtable, Supabase (pgvector), and OpenAI APIs.
- Built automated workflows to search academic sources, collect relevant documents, and process research material into structured knowledge.
- Developed custom FastAPI scraping services running inside Docker containers for extracting content from academic websites.
- Implemented document chunking, metadata extraction, and embedding generation for semantic search, and designed a production-ready RAG pipeline using OpenAI embeddings and a Supabase vector database.
- Built automated PDF ingestion workflows with metadata generation, SHA-256 hashing, paragraph indexing, and vector storage, scaling to 70,000+ vector records.
- Integrated Airtable with n8n to manage research queues, document status, workflow triggers, and project tracking, and deployed the system using Docker, Cloud Run, Google Cloud Storage, and PostgreSQL.

Technologies: n8n, FastAPI, Docker, OpenAI API, Supabase (pgvector), PostgreSQL, Airtable, Google Cloud, DigitalOcean, REST APIs

2. Children's Book Automation Platform

- Developed an AI-powered personalized children's book generation platform from scratch, built end-to-end with n8n and Airtable.
- Connected web forms, Airtable, AI image generation models, and media processing pipelines into a single automated workflow.
- Designed dynamic workflows that generated personalized books using user-provided names, characters, stories, and preferences, while maintaining visual consistency across pages.
- Built a preview and approval workflow allowing customers to review books before final generation, and automated page assembly and delivery, reducing manual production time.

Technologies: n8n, Airtable, OpenAI, Image Generation APIs, Webhooks, REST APIs, Cloud Storage

EDUCATION

M.Tech — Jharkhand University of Technology (JUT), Ranchi

Mar 2021 – Mar 2023

B.Tech- Electronics & Communication Engineering — RTU, Rajasthan

Aug 2016 – May 2020

PORTFOLIO

Music Video Client Showcase: welemoynealexander.com/singles

Automated YouTube Channel (client pipeline example):

youtube.com/playlist?list=PLZMyWhXvnc12sq7hTjgD95kplocCrNIFc

SaaS Studio: bluenodeai.com

Work Demo (Loom): <https://www.loom.com/share/3595f2bc8caa455d81a9868cd3843938>

REFERENCES

Available on request, including a recommendation from Rex Automation for collaborative SaaS project delivery.