RATIKESH KUMAR SINGH

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SUMMARY

AI and full-stack engineer passionate about building scalable, intelligent systems that bridge research with real-world deployment. My goal is to pioneer next-generation AI agents and automation platforms that augment human decision-making. Aiming to leverage expertise in LLMs, system design, and cloud ecosystems to drive large-scale adoption. Committed to creating impactful technologies that redefine efficiency and accessibility.

EDUCATION

BNM Institute of Technology <div align="right">**CGPA: 8.66**</div>

Bachelor of Engineering in Artificial Intelligence and Machine Learning — 2021 – 2025

Notable Coursework: Computer Organisation and Architecture, Computer Networks, Operating Systems, Data Structures and Algorithms, Database Management Systems (DBMS), Object-Oriented Programming using Java, Engineering Mathematics, Statistics, Machine Learning, Artificial Intelligence, Data Science, Big Data Analysis, Cloud Computing, Cryptography, Cyber Security, Natural Language Processing (NLP), and Image Processing & Computer Vision.

EXPERIENCE & WORK HISTORY

Software Engineer (Clodexa – Bangalore, India) — **June 2025 – Present**

- Migrated the entire Clodexa infrastructure from a Vercel, Heroku, MongoDB, and Redis-based environment to Amazon AWS cloud. Configured EC2 Load balancers, built Docker images and pushed them to ECR, deployed the frontend to Amplify, and replaced MongoDB with DocumentDB and Redis with Valkey, ensuring a highly scalable and resilient architecture.
- Leveraged AWS Startup credits to optimize infrastructure costs, achieving a 100% reduction in server and hosting expenses while significantly increasing system performance and reliability.
- Integrated Salesforce, HubSpot, and Pipedrive with the Clodexa platform, enabling seamless lead export from Clodexa to customer CRMs and streamlining sales workflows.
- Replaced the form-based intent signal creation with an AI-agent powered conversational interface that collects user data interactively while resolving user queries, enhancing engagement and reducing drop-offs.
- Designed and launched Triggo Marketplace, a unified ecosystem that consolidates all Clodexa AI agents and products into a single dashboard—allowing users to install, combine, and leverage multiple tools based on their use cases. This architecture significantly boosted automated product upselling.

Coding Expert for AI Training (Freelance) (Outlier AI – Remote) — **March 2025 – Present**

- Contributing to the training and refinement of AI coding models by providing high-quality code samples and technical feedback. Worked on 15+ different training projects like Tauros, Andromeda Ui, Tuxedo (v1, v2 & v3), etc.

Full Stack Developer Intern (Founding Team) (Clodexa – Bangalore, India) — **September 2024 – May 2025**

- Spearheaded AI/ML automation and lead extraction systems, driving ARR growth from $0 to $100K in just 3 months while refining lead scoring models for intent-driven sales prioritization.
- Unified Clodexa's fragmented products by migrating multiple independent codebases into a single platform with a common dashboard, which accelerated adoption and product upselling by 3 times.
- Boosted platform performance by optimizing backend APIs and query execution, reducing initial page load time from 1.8s to 0.8s and enhancing user engagement.

PROJECTS

Clodexa AI – New-Age Sales Intelligence and Automation Tool — FastAPI, Langchain, GPT-4, Selenium, RAG, SFT — **2025**
Built AI-powered systems for end-to-end sales automation at Clodexa, including: **Evon** – Chrome-based AI agent for prospect research using Playwright/Puppeteer and RAG; **Pulse AI** – Lead scraping pipelines using Selenium, BeautifulSoup, and GPT-4; **HeyReplai** – Voice AI sales agent integrated with Twilio, ElevenLabs, and FastAPI. Delivered automation for enrichment, outreach, and conversion at scale. **[Live Demo: clodexa.com]**

Diabetic Retinopathy Prediction Model – Final Year Project (BNMIT) — GAN, CNN, GPT-4o, MongoDB, AWS — **2025**
Developed a medical imaging model using GANs and CNNs (97% accuracy), with GPT-4o for automated diagnostic reporting. Designed a user interface for file upload and visualisation, integrating MongoDB, AWS S3, and Cloudinary for scalable storage.

SKILLS

Languages & CS Fundamentals: TypeScript, Python, Java, JavaScript, HTML5, CSS3, Data Structures, Algorithms, OOPs, Complexity Analysis, Computer Networks, DBMS.

Frameworks & Tools: React, Redux, Next.js, TailwindCSS, FastAPI, Flask, Docker, Git, GitHub Actions, Postman, Playwright, Puppeteer, Selenium, Async, pydantic models, Langchain, BeautifulSoup, React query, Tanstack Router

Cloud & Databases: AWS (EC2, S3, ECR, Amplify, AppConfig, CloudWatch, etc), Google Cloud, Vercel, Heroku, Supabase, PostgreSQL, MongoDB, MySQL

AI/ML & System Design: OpenAI (GPT-4, GPT-4o), DeepSeek, ElevenLabs, Prompt Engineering, LLM Fine-tuning, RAG, SFT, GANs, CNNs, REST APIs, WebSockets, Microservices, OAuth