RONIT RANJAN TRIPATHY

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SUMMARY

I am a Machine Learning Engineer with a strong focus on developing and deploying scalable AI solutions in cloud environments. My experience spans real-time systems such as accident severity prediction and drowsiness detection, where I've applied deep learning techniques using TensorFlow, scikit-learn, and OpenCV. I have a solid foundation in Python and hands-on experience with deploying ML models using tools like AWS, Docker, and Firebase. Passionate about building impactful AI-driven applications, I continuously explore ways to optimize models, leverage cloud infrastructure, and solve real-world problems with data-driven intelligence.

TECHNICAL SKILLS

- **Programming Language**s: Python, SQL
- **Cloud & Deployment**: AWS (EC2, S3), Firebase (Real-time DB), Docker, REST APIs
- **Operating System**s: Linux (Ubuntu), Windows
- **Android Development**: Java, Kotlin, Android Studio, Jetpack Libraries, Firebase Integration, Material Design
- **DevOps & Containerizatio**n: Docker, Docker Compose
- **Machine Learning & Deep Learning**: scikit-learn, TensorFlow, Keras, PyTorch (basic), XGBoost
- **Version Control**: Git, GitHub
- **Computer Vision**: OpenCV, MediaPipe, YOLO, image/video processing

INTERNSHIP

Junior System Engineer, Epam Systems **Jan 2025- June 2025**

- Assisted in designing and deploying cloud infrastructure using **AWS services**, focusing on scalability, high availability, and cost-efficiency.
- Gained hands-on experience in writing and managing **Terraform scripts to automate infrastructure** provisioning and manage resources as code.
- Built and deployed containerized applications using **Docker and managed orchestration** through Kubernetes clusters for efficient scaling and deployment.
- Collaborated with **DevOps teams** to configure and manage Linux-based servers, implement monitoring solutions, and troubleshoot system-level issues.
- Automated routine system administration tasks using **Bash scripting,** improving operational efficiency and reducing manual overhead.
- Explored and contributed to the development of **Generative AI** use cases by integrating **LLM APIs** into cloud-based pipelines for internal tooling.
- Participated in **CI/CD workflows** and implemented secure cloud configurations in line with industry best practices.
- Technologies: **AWS, Terraform, Linux, Python, Docker, Kubernetes, Bash, Generative AI**

EDUCATION

Bachelor's of technology
Noida Institute of Engineering and Technology (NIET, Greater noida) 2021 - 2025

Higher secondary
Ch. Chabbil Das Public School (Ghaziabad) 2020 - 2021

Secondary
JKG School (Ghaziabad) 2018 - 2019

PROJECTS

Generative AI PDF Summarizer with RAG Model (https://github.com/RONITrrt/Generative-AI-PDF-Summarizer-with-RAG-Model)

- Add Developed a Generative AI PDF Summarizer using a **RAG architecture** to generate accurate, context-aware summaries.
- Used vector embeddings and FAISS for semantic chunk retrieval from large PDF documents.
- Integrated **Gemini API** for generating fluent, human-like summaries based on retrieved content.
- Designed a modular, scalable system ideal for research, legal, or enterprise document summarization.

Technologies: **Gemini API, Python, Generative AI, RAG, LangChain, FAISS, PyMuPDF**

KAUWA(The fact checking System) (https://github.com/RONITrrt/kauwa)

- Built an **AI-powered** fact-checking system that verifies user-provided statements against real-time and credible web sources.
- Implemented a **semantic similarity** model to compare input claims with fetched online content and flag potential misinformation.
- Used automated **web scraping** and natural language understanding to gather and analyze supporting or contradicting evidence.
- Delivered **real-time verdicts** (True, False, or Uncertain) with evidence references, making it suitable for news validation and social media checks.

Technologies: **Python, NLP, Transformers, Sentence-BERT, BeautifulSoup, Hugging Face, Scikit-learn, Flask**

Drosiness detection using CV (https://github.com/RONITrrt/Drowsiness)

- Detects driver drowsiness in real-time using a **webcam feed** by monitoring eye activity.
- Uses **Haar cascade** classifiers to locate the face and eyes within video frames.
- A trained **CNN model** classifies eye states (open or closed) to determine alertness.
- Triggers an **alarm** if the eyes remain closed for a certain duration to prevent accidents.

Technologies Used: **OpenCV, Keras, TensorFlow, Haar Cascades, Pygame, NumPy, Python.**

ACCOMPLISHMENTS

- Secured first position in HACKX 2023.
- Finished 4th in Intelx Awiros Appathon 2.0
- Top 8 in NASA Space App Challenge 2023 (District level).
- Top 25 in Truth tell Hacakthon organised by Ministry of India.

PERSONAL INFO

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DECLARATION

- I hereby declare that all the information mentioned above is true and correct to the best of my knowledge.
- I take full responsibility for the accuracy of the information provided.

Signature