

# Rahul Nimbalkar

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## SUMMARY

Innovative AI/ML engineer with a Master's in Computer Science and **3 years** of experience in developing and deploying **machine learning models**. Proficient in **Python, TensorFlow, PyTorch, and AWS**. Passionate about leveraging AI to solve complex business problems.

## EXPERIENCE

### AI/ML Engineer

Resilience Inc, Florida, USA

January 2024 - Present

- Led the development and deployment of a cutting-edge **Retrieval-Augmented Generation(RAG)** project on AWS, enhancing the chatbot's performance by 20% through advanced AI models and **real-time data retrieval**.
- Designed and implemented **scalable AWS architectures**, utilizing services like Lambda, DynamoDB, and S3, resulting in a 15% improvement in data processing efficiency and cost reduction.
- **Optimized** AI infrastructure by integrating GPU acceleration for machine learning workflows, significantly improving model training speed and inference efficiency.
- Enhanced system performance by implementing ML compiler optimizations, enabling faster execution of AI models and reducing latency by 20% in real-time applications.

### Teaching Assistant

State University of New York, Buffalo, USA

January 2023 - May 2023

- Collaborated with a respected professor on a cutting-edge machine learning project focused on Generative Adversarial Networks (GANs), contributing to innovative research and algorithm development.
- Mentored 42 engineers in an introductory machine learning course, fostering a deep understanding of machine learning principles.

### AI Software Developer

Protonn, Bangalore, IND

February 2021 - July 2022

- Led the development of **NLP-based voice recognition** using deep learning in an Android app, increasing customer satisfaction by 25% through advanced sentiment analysis.
- Worked with interdisciplinary teams to design AI-driven curriculums, games, and **optimized data structures** for Social and Emotional Learning (SEL), boosting user engagement by 30%.
- Improved AI system **performance and scalability** by optimizing React Native integrations, increasing model accuracy by 23%.
- Provided valuable insights on technical designs and code improvements, driving **increased testing efficiency** and system stability.

### Data Science Intern

Shantala Pvt Ltd, Hubli, IND

June 2020 – December 2020

- Developed an **e-commerce recommendation engine** that increased product recommendation accuracy by 15%, driving a significant boost in sales.
- Improved data processing efficiency by 25% through **data cleaning and preprocessing**, accelerating analytics and business insights delivery.
- Collaborated with cross-functional teams to integrate actionable data insights, contributing to a 10% increase in platform revenue.

## SKILLS

**Languages and Technologies:** Python, R, SQL, JavaScript, C, HTML, CSS, React.js

**Frameworks:** Langchain, TensorFlow, PyTorch, Pandas, Keras, Spark, Flask, Django, HuggingFace, YOLO, Streamlit, Scikit learn, Matplotlib

**Tools:** OpenCV, Git, Google Cloud, VSCode, Node.js, RESTful API, Docker, Kubernetes, Jupyter, Pycharm, Linux, Cloud, Tableau

**Databases:** AWS, GCP, MongoDB, Cloud Firestore, MySQL, Hadoop, Neo4j, Firebase, Data mining, PostgreSQL

**Machine Learning/AI:** NLP, LLM, Computer Vision, Deep Learning, GAN, Transformers, Spacy, Statistics, Vector DB, Fast API

## EDUCATION

Masters in computer science - University at Buffalo (SUNY) • Buffalo, NY

Aug 2022 - Jan 2024

## PROJECTS

### RAG Enhanced AI Chatbot (Python, Streamlit, LangChain, Databutton):

- Built a chatbot using Python, Streamlit and LangChain with PDF parsing, secure API key management and efficient data indexing for improved query accuracy and response quality.

### Facial Emotion Detection System (Python, PyTorch, TensorFlow, NLP):

- Developed a real-time system using Python and deep learning frameworks (CNN, VGG, ResNet) achieving 68% accuracy in emotion recognition.

### Movie Recommendation Web System (Streamlit, Excel, Python, Pandas, Scikit-learn, Pickle):

- Developed a web app providing personalized movie suggestions from the TMDB 5000 dataset using content-based and collaborative filtering.

## CERTIFICATIONS

### AWS Certified Developer - Associate - 2024

- Proficient in optimizing and deploying cloud applications, leveraging CI/CD workflows for real-time issue resolution.