Aniket Katkar

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LinkedIn | GitHub

EXPERIENCE

Dec 2024 – June 2025

TECH MAHINDRA – MAKERS LAB R&D | PUNE, INDIA

AI Intern

- Developed Generative AI models like StyleGAN3 for deepfake detection and image synthesis.
- Developed an AI agent that translates text prompts into fully functional HTML, CSS, and JavaScript code
- Implemented RAG using Llama LLM and Vector DB for knowledge retrieval and intelligent response generation.
- Implemented Weapon Detection using YOLO for real-time security surveillance and threat Identification.
- Deployed AI assistant to conduct interviews end-to-end, asking questions and recording candidate responses automatically.
- Designed a Question Generation System using Job Descriptions and Resumes with NLP techniques
- Optimized LLM-based solutions for efficiency, scalability, and real-world deployment.

July 2024 – September 2024

HACKVEDA LIMITED

AI Professional Intern

- Utilized data analysis and data science techniques
- Developed project outlines based on customer needs
- Demonstrated skills in AI and ML technologies

April 2024 – June 2024

UNICONVERGE TECHNOLOGIES

Data Science Intern

- Developed and implemented machine learning models for early-stage Parkinson's disease detection using medical datasets.
- Collaborated with healthcare professionals to enhance model accuracy through feature engineering and data preprocessing.
- Utilized AI/ML algorithms, including Decision Tree, KNN and Random Forest, to improve diagnostic precision.
- Optimized model performance through hyperparameter tuning and cross-validation, ensuring higher accuracy in disease diagnosis.

TRAINING / WORKSHOP

January 2024 – April 2024

SAP CODE UNNATI PROGRAM

Key Skills - Machine Learning, Deep Learning, Computer Vision, Internet of Things (IoT)

Achievements –

- Developed a Time Series Forecasting using advanced machine learning algorithms, enabling precise predictions of future data trends based on historical patterns.
- Gained proficiency in ML algorithms, CV techniques and IoT protocols.
- Successfully completed Certifications and Assessment related to curriculum

PROJECTS

1. **DEEPFAKE DETECTION SYSTEM USING STYLEGAN3 ARCHITECTURE**

- Developed a deep-learning-based system to detect deepfake images, leveraging the StyleGAN3 Architecture for generating modeling and forgery analysis.
- Build an end-to-end pipeline including image preprocessing, Deepfake classification, and Decision-making using a modular AI Server.

- Deployed the system on AWS with GPU-enabled EC2 instances, Integrating components like API Gateway, Web Server, AI server for Real-time Performance.
- Enabled secure identity verification for applications such as E-Kyc, Social Media Account validation, and news/media Authenticity.

2. **AI-POWERED AUTOMATED INTERVIEW SYSTEM**
   - Deployed AI assistant to conduct interviews end-to-end, asking questions and recording candidate responses automatically.
   - Persisted both questions and answers in storage, then ran real-time NLP scoring for relevance and clarity.
   - Continuously monitored video feed with voice, eye-gaze, and YOLOv8 object detection to flag malpractice.
   - Delivered fully autonomous interview evaluations with instant scoring dashboards—no human intervention required.
3. **AGNETIC AI-DRIVEN UI GENRATOR**
   - Developed an AI agent that translates text prompts into fully functional HTML, CSS, and JavaScript code.
   - Designed natural-language parsing to interpret desired UI components, layouts, and styles from user specifications
   - Automated frontend scaffold generation, producing clean, modular .html, .css, and .js files for rapid prototyping.
   - Integrated seamless end-to-end pipeline enabling developers to spin up custom web interfaces with minimal manual coding.
4. **WEAPON DETECTION SYSTEM**
   - Developed a real-time weapon detection system using YOLO architecture, enhancing security applications with high accuracy.
   - Implemented advanced object detection algorithms to identify weapons swiftly, improving threat response times.
   - Optimized model performance for real-time surveillance, ensuring efficient and reliable detection in security-sensitive environments.

SKILLS

- Python
- Natural Language Processing
- Machine Learning
- Computer Vision
- RAG
- Generative AI
- Agentic AI
- Large Language Models (LLMs)
- Deep Learning
- Prompt Engineering

CERTIFICATIONS

- Cloud Computing Fundamentals (IBM SkillsBuild)
- Data Analytics with Python (NPTEL)
- Participation in Namma Yatri Open Mobility Challenge Organized by Namma Yatri
- Python for Machine Learning: Unlocking the Power of Artificial Intelligence (IBM SkillsBuild)

RESEARCH PAPER

- A Comparative Study of Vector Databases for High-Dimensional Data Search – Click Here

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EDUCATION

2021-2025	**PARUL INSTITUTE OF TECHNOLOGY** (B. Tech: Computer Science Engineering, **CGPA – 7.85**)	Vadodara, Gujrat
2019-2021	**SANJIVANI SAINIKI SCHOOL & JR. COLLEGE** (HSC: Maharashtra Board, Percentage – 91.83%)	Kopargaon, Maharashtra
2013-2019	**SANJIVANI SAINIKI SCHOOL & JR. COLLEGE** (SSC: Maharashtra Board, Percentage–88.60%)	Kopargaon, Maharashtra