Umar Balak

Machine Learning Developer
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GitHub | Linkedin

Education

Saraswati College Of Engineering — Navi Mumbai, India
BE Computer Science And Engineering (AIML) — July 2021 - July 2025
CGPA: 8.43

Anjuman-E-Islam Janjira Jr. College of Science and Arts — Murud, Maharashtra
HSC Science — June 2020 - June 2021
Percentage: 92.50%

Anjuman-E-Islam Janjira High School — Murud, Maharashtra
SSC — June 2018 - June 2019
Percentage: 88.40%

Skills

Programming Languages:	Python, SQL
Libraries/Frameworks:	TensorFlow, Keras, Scikit Learn, NLTK
Tools / Platforms:	Google Colab, Jupyter Notebook, Anaconda, Pycharm, VS Code
Databases:	MySQL

Projects / Open-Source

AI Proctor | Link — *Python, YOLOv8, OpenCV, MediaPipe*
Created an AI-driven proctored exam system featuring real-time surveillance capabilities using YOLOv8 object detection for background monitoring, OpenCV and MediaPipe for eye gaze movement tracking, head movement tracking, and microphone-based voice surveillance to prevent cheating and ensure exam integrity.

MoodMapper | Link — *RNN, Keras, NLTK*
Developed an advanced sentiment analysis system based on Recurrent Neural Networks (RNNs) capable of accurately classifying text sentiment into positive, negative, or neutral categories. Leveraging state-of-the-art RNN architectures, the system provides nuanced analysis of textual data, enabling insightful sentiment interpretation for various applications.

TinyVGG | Link — *CNN, Tensorflow, Keras*
Designed and implemented a customized Convolutional Neural Network (CNN) architecture tailored for the CIFAR-10 dataset. Aiming to outperform the VGG-16 model, the project focused on improving classification accuracy, reducing training time, and minimizing model size for efficient deployment in real-world applications.

Certifications

- Microsoft Azure AI-900 - **Microsoft**

Honors & Awards

- NASA Space App Challenge: Top 10 Teams (National Level) - Developed a project collaboration system utilizing ML techniques for team formation and talent acquisition.
- Quasar 2.0 Hackathon: Smart Education Domain, 1st Prize - Developed AI Proctor, an innovative solution for enhancing exam integrity and security.