Nitesh Rajbanshi

+977 98007319159 niteshrajbanshi78@gmail.com Panchkhal,kavre,Nepal
in/nitesh-rajbanshi-87a481231/ github.com/nit-2081 devfolio.co/@nit_esh1418

I am a 4th year Artificial Intelligence student who aspires to be an AI specialist to help the world turn into the mid-technological era.

AREAS OF EXPERTISE

Python Programming, Machine Learning, Deep Learning, Natural Language Processing, Con, Generative AI, Diffusion model, RNN- {LSTM, BiLSTM, Encoder, Decoder, Attention model, IOT Robotics: {Arduino, Raspberry pi4B, jetson nano}

PROJECTS

Ordered chronologically

- **Skin Diseases Classification:** using different deep learning models it classifies skin diseases and also integrate in app done in 2nd semester of B.tech AI
- **Sound Event Detection:** a powerful and versatile system designed for the accurate detection of events in sound data, done in 3rd semester of B.tech AI
- **Multi-Model-Late-Fusion-in-Sound-Video-Event-Detection:** The Multi-Model Late Fusion ai model in Sound-Video Event Detection; a powerful and versatile system designed for the accurate detection of events in multimedia data, specifically focusing on sound and video signals, done in 4th semester of B.tech AI.
- **Image Outpainting by Diffusion model:** Utilizes Diffusion model to out paint the Nepal historical images while preserving their integrity, done in 5th semester of B.tech AI.
- **Image Outpainting and Colorization by Advance technique GenAI:** making more better results and optimized model still continue in 6th semester of B.tech AI.
- **Face Detection and Gender Classification:** Detect faces in real-time from a webcam feed, predicts the gender of each detected face, and captures and saves cropped images of the faces at regular intervals, providing a hands-on demonstration of face detection and gender classification.
- **Background Remover:** a web application for removing backgrounds from images using a deep learning model.
- **Self Navigating Robot:** The IOT project where the robot creates the map by SLAM Algorithm and Navigate using NAV2 of ROS2.

SKILLS

- **Programming Language:** Python, C, C++
- **Database:** MongoDb, mySQL, Firebase
- **DevOps:** Docker, Azure
- **Firmware:** Arduino, Raspberry Pi
- **Soft Skills:** Presentation, Planning, Organized, Creative Problem-Solving, Teamwork, Active Listening, Adaptability, Analytical Thinking

CLUB AND COMMUNITIES EXPERIENCE

Vice President — Kathmandu University
KUAIC (Kathmandu University Artificial Intelligence Club) — Aug 2022 - Feb 2024

Accomplished VP adept at spearheading diverse projects Including Datathone, AI Meet, Python Boot Camp, GitHub Day, and Aicrusade Hackathon. Demonstrated versatility in Driving impactful initiatives across various domains.

Student Ambassador — Kathmandu
NESRA*(Nepalese Space Research Association)* — Jun 2023 - Present

Dedicated student ambassador at NESRA, facilitating Space Days and hosting workshops focused on celestial bodies and space exploration, fostering a passion for astronomy and science among peers.

Organizing committee of Data Crunch — Kathmandu
Code for Nepal — Mar 2024 - Present

I am working in organizing committee of Data Crunch which is Hackathon conduct by Code for Nepal Company. - My role is to handle internal affairs as well as guide the participants in their projects.

ACHIEVEMENTS

Research Paper on "Deep Learning based Tomato Disease Detection and Remedy Suggestions using Mobile Application"

Our AI-driven mobile application aids traditional farmers in Nepal by identifying and offering remedies for vegetable diseases, focusing on tomatoes. Utilizing the You Only Look Once (YOLO) object detection method, our system achieves a mean average precision of 0.76. With a user-friendly interface in local languages, it empowers farmers with limited access to agricultural expertise.

link: https://arxiv.org/abs/2310.05929

Research Abstract Paper on "Sound Event Analysis for Wildlife Preservation"

Presented at the International Conference on Technologies for Computer, Electrical, Electronics & Communication (ICT-CEEL 2023), this research focuses on developing an automated Sound Event Detection (SED) system using a custom-built dataset and Convolutional Neural Network (CNN) model. The study monitors wildlife activities in Nepal's national parks to mitigate animal poaching and human-wildlife conflicts. The system achieved a high mAP score of 0.935, demonstrating its effectiveness across multiple neural networks and evaluation metrics.

link: https://ictceel.khwopaconference.com/uploads/conferencepaper/abstract/1076.pdf

EDUCATION

B.tech in Artificial Intelligence — Panchkhal, Nepal
Kathmandu University — Feb 2021 - 2025(expected)

I am pursuing an undergraduate degree B.Tech in Artificial Intelligence. Aggregated GPA over 3.7 (till 5th sem)

+2, National Examination Board — Biratnagar, Nepal
Kantipur College, Biratnagar — Feb 2019 - Jun 2020

- Student of Science Faculty having CGPA 3.45/4.0, Semi Finalist in Delta 2.0 Robo Soccer

Secondary Education Examination — Biratnagar, Nepal
Adarsha Secondary School — May 2005 - May 2019

SEE: 3.65 / 4.0

Appreciated by Biratnagar Government of Nepal, for Scoring A+ grade in SEE

LANGUAGES

- **Nepali:** [Native]
- **Rajbanshi:** [Mother tongue]
- **English:** [Fluent]
- **Hindi:** [Fluent]

REFERENCES

Associate Prof. Bal Krishna Bal -
Associate Dean, School of Engineering,
Kathmandu University (KU),
+97711415100
bal@ku.edu.np

Dr. Yagya Raj Pandeya - *Head of Department, Department of AI,*
Kathmandu University (KU),
+977 9701002605
yagya.pandeya@ku.edu.np