Ritesh Raut

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Summary

A proactive Computer Science student with hands-on experience developing end-to-end AI and Machine Learning solutions. Proven ability to design, train, and evaluate Convolutional Neural Networks (CNNs) for computer vision tasks, achieving 82% accuracy in an image classification project. Skilled in leveraging Natural Language Processing (NLP) and Retrieval-Augmented Generation (RAG) with FastAPI to build intelligent, user-centric applications. Eager to apply practical knowledge of deep learning, model optimization, and software engineering to solve complex problems in an AI/ML internship role.

Education

TRIBHUVAN UNIVERSITY Nepal
Bachelor of Science in Computer Science and Information Technology(BSC.CSIT)
Relevant Coursework: Artificial Intelligence, Machine Learning, Deep Learning, Data Structures & Algorithms, Object-Oriented Programming, Database Management Systems, Linear Algebra, Probability & Statistics.

Technical Skills

- **Programming Languages:** Python, C++, JavaScript, Dart
- **AI/ML Libraries & Frameworks:** TensorFlow, Scikit-learn, Pandas, NumPy,NLTK,SpaCy
- **AI/ML Concepts:** Deep Learning, Computer Vision (Image Classification), Natural Language Processing (NLP), Retrieval-Augmented Generation (RAG), Supervised Learning, Transfer Learning
- **Frameworks & Tools**: FastAPI, Flutter, Git, GitHub, Jupyter Notebooks

Projects

AI-Powered Skincare Advisor | GitHub
- Developed and trained a Convolutional Neural Network (CNN) to classify diverse skin types from user-provided images and was able to achieve accuracy of 82%.
- Streamlined the user experience by engineering a RAG-based chatbot with FastAPI, enhancing personalized product recommendation efficiency.
- Developed the project from ideation to a functional prototype, successfully delivering a complex AI solution that addresses a real-world consumer need.

Community Interest Calculator | GitHub
- Developed and delivered a mobile application using Flutter to automate manual interest calculations for community groups.
- Improved financial accuracy and transparency for users by creating a mobile-first solution.
- Incorporated feedback from potential users to refine application features and improve usability.

Machine Learning Classification Models | GitHub
- Developed and trained various machine learning models, including CNNs and NLP-based text classifiers, adhering to data science best practices.
- Conducted comprehensive performance analyses, identifying and rectifying discrepancies in model architectures to boost accuracy.

Activities & Interests

- Active contributor to open-source AI projects and a regular participant in hackathons.
- Continuously learning new AI architectures and frameworks through personal projects and online courses.
- Engage in competitive programming challenges to enhance algorithmic problem-solving skills.