ANUP RIJAL

Kirksville, Missouri

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EDUCATION

Truman State University   **August 2022 – May 2026**
Kirksville, MO, USA

Major 1: BS Computer Science, Major 2: BS Data Science **GPA: 3.74/4.00**

RESEARCH

Spatial and Channel Integration with SENet   **Truman State University (Grant:$8,000)**
Emerging Innovator Summer Research Program   *Kirksville, MO, USA*

- Developed a novel SC-SENet architecture integrating spatial and channel attention mechanisms using Separable SE layers.
- Achieved 99.76% accuracy with 0.58M trainable parameters on lung image segmentation and malaria detection datasets.

Apple Leaf Disease Analysis Using Attention Models   **Truman State University (Grant: $4,000)**
TruScholar Program   *Kirksville, MO, USA*

- Developed a model leveraging Squeeze-and-Excitation networks for automating apple leaf disease detection.
- Achieved state-of-the-art accuracy, enhancing sensitivity to subtle disease patterns and improving real-world applicability.

An Efficient and Effective Network Is All You Need   **Truman State University (Grant: $4,000)**
TruScholar Program   *Kirksville, MO, USA*

- Introduced a ConvNet architecture for Brain Tumor detection by substituting pointwise CNNs with efficient 1D CNNs.
- Addressed high cost complexity in resource-constrained environments, achieving 99.39% accuracy with only 0.314M parameters and 3.52M FLOPs, outperforming existing models like RCN (98.99%), SEC (99.07%), and RCN+SE (99.21%).

EXPERIENCE

IT Service Center   **March 2023 – Present**
Truman State University   *Kirksville, MO, USA*

- Assisted over 1000 students, parents, and faculty with technical issues, achieving a 95% first-contact resolution rate.
- Troubleshooted and documented a variety of hardware and software issues, improving issue tracking and follow-up efficiency.

Academic Peer Tutor   **April 2023 – Jan 2024**
Center for Academic Excellence, Truman State University   *Kirksville, MO, USA*

- Tutored C++ and Calculus during weekly drop-in sessions, providing tailored support to meet individual student needs
- Maintained professional records to effectively track progress and adapt to various learning styles, ensuring productive tutoring.

PROJECTS

NohungerZone ↗   **June 2024**
MERN Stack, Firebase

- Built a platform to connect donors and NGOs, reducing food waste through timely donation updates and pickups via Firebase.
- Developed a matching system that pairs donations with recipients based on preferences.

Deceptiguard ↗   **April 2024**
Python, TensorFlow, OpenCV

- Designed a deepfake detection tool using CNN and OpenCV, achieving 95% accuracy in real-time deepfake identification.
- Optimized performance to work efficiently on lower-end hardware with real-time alerts via Win11toast.

Movie Recommendation System ↗   **July 2024**
Python, Collaborative Filtering, TMDB Dataset

- Developed a movie recommendation system using collaborative filtering and content-based filtering (TMDB metadata).
- Enhanced recommendation accuracy with TF-IDF vectorization and cosine similarity for measuring movie similarity.

EXTRACURRICULAR

Google Developer Student Clubs (GDSC)   **August 2024 – Present**
Project Lead   *Truman State University, Kirksville, MO, USA*

- Led a team in designing projects, including a portfolio website for a CS faculty member and a club management system, by defining roles to ensure efficient progress.
- Collaborated with CS faculty and the community to align projects with stakeholder needs and enhance their value.

ACM, Truman Cricket Club, Namaste Nepal   **August 2022 – Present**
Member   *Truman State University, Kirksville, MO, USA*

- Participated in coding competitions and workshops with ACM, organized events as a founding member of the Truman Cricket Club, and engaged in cultural activities with Namaste Nepal.

TECHNICAL SKILLS

Languages: Python, Java, C, C++, JavaScript, SQL, NoSQL, R, XML
Technologies/Frameworks: ReactJS, NextJS, NodeJS, ExpressJS, Git, Mongo, PyTorch, TensorFlow, OpenCV

CERTIFICATIONS

- Mastering Data Structures & Algorithms - UDEMY
- Data Analysis with R Programming - Google
- Python for Data Science, AI & Development - IBM
- CS50 - Harvard University