

AAYUSH ACHARYA

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Education

Tribhuvan University, IOE Pulchowk Campus

Nov. 2017 – April 2022

Bachelor in Computer Engineering

Grade: 77.55%, First Division honors

United Academy

2015 – 2017

High School

Grade: 84.8%, First Division with distinction honors

Test scores

TOEFL Total: 108, Reading: 28, Listening: 29, Speaking: 28, Writing: 23

GRE: Total: 318, Quant: 164, Verbal: 154, AWA: 4.0

Research

Nepal Applied Mathematics and Informatics Institute for research (NAAMII)

2021-2022

Research intern

- Implemented a seamless integration of Automatic Speech Recognition (ASR) and Natural Language Processing (NLP) by employing the self-supervised wav2vec2 model for audio transcription. The integration enhances the overall system's accuracy and efficiency in processing Nepali audio data.
- Created a total of 16 experiments using the combination of wav2vec2 base model(Base) trained on LibreSpeech english dataset(E), Base + E + Indic Language(I), Base + E + Curated nepali dataset(N), and Base + E + I + N which were tried on top of 4 different language models.
- Integrated a BERT-based Multilingual Representations from Indian Languages (MuRIL) model specifically designed for Indic languages like Nepali. This incorporation significantly enhances the system's ability to understand and process the nuances of the Nepali language, ensuring more accurate categorization of the audio content.

Teaching/Mentoring experience

IOE Pulchowk Campus in collaboration with Rara Labs

2022 – 2023

Undergraduate thesis mentor

- Established a consistent mentorship routine with weekly progress meetings, ensuring ongoing support and guidance for the two undergraduate thesis students. This approach facilitated a structured environment for discussing project advancements and challenges.
- Engaged in a reciprocal exchange of insights and advice with the students, creating a collaborative mentorship dynamic. Partnered with the university department to organize presentation workshops, emphasizing a collaborative effort in enhancing students' skills.

Presentation

7th International Workshop on Effective Engineering Education (IWEEE) — Junior year

2022

- Presented an image classification model designed to assist farmers by enabling them to capture pictures of pests, identify them, and suggest their natural control methods.

Affiliations

Rara Labs: Software Engineer — 2022–Present

Nepal Applied Mathematics and Informatics Institute for research (NAAMII): Research intern — 2021-2022

Logpoint Inc.: Solutions intern — 2022-2022

Microsoft Student Learn Ambassador(MLSA): Beta Member — 2020-2022

Engineering Youth Network Amnesty International Nepal: Member — 2019-2022

Honors and outreach

- Ranked under top 1% in undergraduate entrance examination among 15000 students.
- Regular receiver of TU stipend, a merit based semester wise allowance for academically well-performing students.
- Ranked 3rd out of 600 students in high school in National level examinations.
- Organized LOCUS Hack-a-week, a 7-day hackathon event with > 50 applying teams of 4 and reach all over Nepal.
- Organized Advanced C workshop along with a workshop on Particle Swarm Optimization as part of MLSA.