HIMAL ACHARYA

Nepal College of Information Technology
Dept. of Electrical & Electronics Engineering
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Independent and self-motivated research enthusiast with expertise in Computer Vision and Machine Learning. Graduated with a Master's degree in **"Information and Communication Engineering"** from the Institute of Engineering, Pulchowk Campus, Tribhuvan University, Kathmandu, Nepal.

EDUCATION

Pulchowk Campus, Tribhuvan University *May 2019*
MSc in Information and Communication Engineering
GPA: 85.93 %
Major Courses: Color Image Technology, Image Processing, Machine Learning & Pattern Recognition.
Project: Vehicle Monitoring at Intersections of Nepal Roads Using Video Data
Thesis: Abnormal Motion Pattern Detection in Video Sequences by Unsupervised Approach

Paschimanchal Campus (Formerly Western Region Campus), Tribhuvan University ***November 2011***
Bachelors in Electronics and Communication Engineering
GPA: 76.26%
Major Courses: Analog and Digital Signal Processing, Communication Systems, Electronics Circuit.
Final Year Project: Automatic Rescue Robot

RESEARCH EXPERIENCE

Graduate Research Assistant April 2018 - May 2019
Supervisor: Dr. Basanta Joshi Pulchowk Campus

- Project: Contextual Combination of Gaussian Mixture Model and HAAR Cascade classifier for vehicle classification
- Master's Thesis: As a MSc thesis student, I worked on detecting and localizing anomalous motion pattern in video sequences using hierarchical agglomerative clustering approach in datasets UCSD, UMN datasets.

TEACHING EXPERIENCE

Project Supervisor February 2017 - Present

Nepal College of Information Technology

- Supervised third year and fourth year undergraduate projects

Lecturer, Nepal College of Information Technology February 2017 - Present

- Delivered lecture classes on subjects "Image Processing and Pattern Recognition", "Signal Processing" and "Electronics Circuits".
- Led a weekly lab and tutorial sessions
- Graded assignments and tests

· Interacted with undergraduate students during office hours

Adjunct Lecturer, Kathmandu University January 2024 - May 2024

· Office hours,grading, lab lectures for graduate course "Information Theory and Coding"

Teaching Assistant July 2012 - July 2015

Nepal College of Information Technology
Office hours,grading, lab lectures for undergraduate courses - Filter Design, Analog Communication and Electronics Circuits

ACADEMIC HONORS

Fellowship for Undergraduate Study *November 2007 - November 2011*
by Tribhuvan University

Scholarship, awarded by Tribhuvan University *November 2007 - November 2011*
for ranking top 1among undergraduate students

PROFESSIONAL AFFILIATIONS AND REVIEW ACTIVITIES

Member of Nepal Engineering Council (Regd No. 3025, Category of Electronics and Communication 'A'), Member of Nepal Engineers Association

Reviewer for Conference on Innovation in Computing, Science, Engineering & Technology ICSET-2024

INDUSTRY EXPERIENCE

Backend Python Developer April 2020 - Present
Techxonia LLC: Self-Employed Remote (Wyoming,US)

· Developed REST APIs using Python for an Android application launched on the Play store in May 2022

PUBLICATIONS

International Journals

· Acharya, H., & Joshi, B. (2021). "Abnormal motion pattern detection in video sequences by an unsupervised approach". *Engineering and Applied Science Research*, 48(5), 509–517.

National Journals

· H. Acharya, "Travel Time Estimation for Pedestrian with GPS Cell Phones as Probes", *KJEM*, vol. 1, no. 1, pp. 27–30, Dec. 2018.

Conferences

· H. Acharya, Basanta Joshi, "Abnormal Motion Pattern Detection in Surveillance Video Sequences by Clustering Approach," *6th IOE Graduate Conference*, May 24–25, 2019, Lalitpur, Nepal.

· H. Acharya, Basanta Joshi, "Vision Based Motorcycle Monitoring at Intersection of Nepal Roads," *Proceedings of 9th National Students' Conference on Information Technology (NaSCoIT 2018)*, December 29, Kathmandu, Nepal.

SKILLS

Programming Languages	Python, MATLAB
Libraries	NumPy, Scikit-learn, OpenCV
Utilities	Jupyter Notebook, Visual Studio, Git, Latex