Rabin Adhikari

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WORK EXPERIENCE

NepAl Applied Mathematics and Informatics

Apr 2022 - Present

Institute for research

Research Assistant

Conducted research on NLP, Medical Imaging, Semi-supervised Learning, and Multi-modal Learning.

LOCUS Mar 2021 — May 2022

Software Coordinator

- · Managed software events and resolved different technical issues
- · Organized about 10 software events

Clamphook Nov 2019 — Jun 2021

Full Stack Developer

- Implemented the server side of clamphook.com utilizing MongoDB and Flask
- Used front-end technologies such as React for front-end and back-end communication
- Deployed servers using nginx, gunicorn, and Cloudflare, which handles 5,000 users concurrently

IEEE Pulchowk Student Branch

Feb 2020 — Dec 2020

Event Chair

- Conducted a Tech Talk with about 500 participants on A Platform for Innovations and Ideas with the CEOs of Yatri Motorcycles and International Green Developers Nepal as speakers
- Organized a blood donation program with the assistance of the Nepal Red Cross Society

ASMI May 2019 — Mar 2020

Junior Researcher

I researched in two-dimensional *In-Video Advertising*. I researched two-dimensional In-Video Advertising to allow the companies to provide advertisement through videos of the platforming seamlessly without blocking the video content.

EDUCATION

Bachelor in Computer Engineering

Nov 2017 — Present

Central Campus, Institute of Engineering, Tribhuwan University, Nepal

- Secured Rank 1 In Entrance Exam in 2074 B.S. (2017 A.D.) among nearly 18,000 candidates
- Graduated in the first division with an aggregate of 79.96%

High School Jun 2015 — Jun 2017

SOS Hermann Gmeiner School Bharatpur, Bharatpur, Nepal

- Graduated in the Top 5 of the class
- Secured a distinction with an aggregate of 85.3%

INTERNSHIPS Research Intern

Aug 2021 — Apr 2022

NepAl Applied Mathematics and Informatics Institute for research

Worked on tweets classification in 8 inclusive COVID-related categories as my final year project thesis supervised by Bishesh Khanal, Ph.D. as a research intern at NAAMII.

NLP Research Intern

Jun 2020 — Dec 2020

Diyo.ai

- Researched the availability of Nepali language corpora and created one of nearly 3 GB in size
- Used the *Huggingface* transformers library to train an *ALBERT* language model for the Nepali language

PUBLICATIONS

- Adhikari, Rabin, Safal Thapaliya, Nirajan Basnet, Samip Poudel, Aman Shakya, and Bishesh Khanal. "COVID-19-related Nepali Tweets Classification in a Low Resource Setting." In *Proceedings of The Seventh Workshop on Social Media Mining for Health Applications, Workshop & Shared Task*, pp. 209-215. 2022.
- Buddhacharya, Sangam Man, **Rabin Adhikari**, Nischal Maharjan, and Sanjeeb Prasad Panday. "Monocular Depth Estimation using a Multi-grid Attention-based Model." *Journal of Innovative Image Processing* 4, no. 3 (2022): 127-146.

LICENSES & CERTIFICATIONS

- <u>Generative Adversarial Networks (GANs) Specialization</u> by deeplearning.ai on Coursera
- Natural Language Processing Specialization by deeplearning ai on Coursera
- AI for Medicine Specialization by deeplearning ai on Coursera
- TensorFlow Developer Professional Certificate by deeplearning.ai on Coursera
- TensorFlow: Data and Deployment Specialization by deeplearning on Coursera
- $\bullet \ \ \underline{\textbf{Applied Data Science with Python Specialization}} \ \ \text{by University of Michigan on Coursera}$
- Mathematics for Machine Learning Specialization by Imperial College London on Coursera
- Machine Learning by Stanford University on Coursera

PROJECTS

ReadIt

Implemented and trained the state-of-the-art $Retrospective\ Reader$ on $SQUAD\ 2.0$ which extracts the span of the text from provided context relevant to the given question

COVAPLAD

Programmed a system using Django and MySQL where volunteers apply for various events and Plasma Donors donate their convalescent plasma to save others lives

Kukurshetra

 $Coded\ a\ cross\ platform\ desktop\ app\ written\ in\ C++\ which\ runs\ on\ both\ Linux\ and\ Windows\ where\ two\ users\ on\ the\ same\ LAN\ shoot\ bullets\ at\ each\ other\ from\ their\ machines$

3D Modelling of ICTC

Simulated the ICTC building in the Pulchowk Campus in C++ using OpenGL and GLSL

TECHNICAL SKILLS

- Python programming language including libraries useful for machine learning and deep learning like Numpy, Pandas, Scikit-Learn, TensorFlow, Pytorch, etc
- Client side programming using JavaScript/Typescript and its frameworks like React
- $\bullet \ \ \text{Server side programming using } \textit{Node.js} \ \text{frameworks like } \textit{express} \ \text{and Python frameworks like } \textit{Django} \ \text{and } \textit{Flask}$
- Experience with various SQL and NoSQL databases
- Linux skills like vim, tmux, shell scripting and experience with different Linux distributions
- Version control systems like Git
- Android programming using React Native
- Computer Graphics programming using OpenGL along with SDL and SFML

AFFILIATIONS

- Member, IOE FOSS Community, 2017 to Present
- Member, Mozilla Campus Club, Pulchowk Campus, 2017 to 2019
- LOCUS, Nepal, 2017 to Present

SPOKEN LANGUAGES

English: Full professional proficiency
Hindi: Professional working proficiency
Nepali: Native or bilingual proficiency

REFERENCES

Bishesh Khanal, Ph.D.

Director, NepAl Applied Mathematics and Informatics Institute for research (NAAMII) $\underline{ bishesh.khanal@naamii.org.np}$

Aman Shakya, Ph.D.

Assistant Professor, Pulchowk Campus, Institute of Engineering, Tribhuwan University, Nepal aman.shakya@ioe.edu.np