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Rabindra Lamsal (Nepalese)

Education

Master of Technology, Computer Science and Technology, Jawaharlal Nehru University, New Delhi, 2017–2019.

CGPA: 8.70 out of 9.0, Equivalent percentage: 92% out of 95%.

Dissertation Title: *Disaster Response using Artificial Intelligence.*

Dissertation graded 9.0 out of 9.0 by both the external and internal examiners.

Bachelor of Engineering, Computer Engineering, Kathmandu University, Dhulikhel, 2012–2016.

CGPA: 3.08 out of 4.0

12th, Science stream, Higher Secondary Education Board, United Academy, Lalitpur, 2009–2011.

Percentage: 81.04%

Appointments

Project Associate, Special Centre for Disaster Research, Jawaharlal Nehru University, New Delhi, 2018–2019.

Developed two Artificial Intelligence-based Disaster Response Systems. Presented research papers in the Fourth World Congress on Disaster Management (2019) and the International Workshop on Reinforcing Coastal Zone Disaster Management (2018).

Junior System Administrator, Annapurna Post, Corporate Tower, Kathmandu, 2016–2017.

Implemented DHCP server, Firewall, NAT, DNS server, Web server (NGINX, Apache).

Founder Coordinator (Community Head), Kathmandu University WordPress Club, Kathmandu University, Dhulikhel, 2015–2016.

Conducted workshops and talks related to open-source web software WordPress

System Administrator, Kathmandu University Boys Hostel, Kathmandu University, Dhulikhel, 2014–2015.

Deployed a LINUX based networking environment in the hostel network. Managed bandwidth for each user and performed maintenance of server, switches and routers.

Senior Volunteer, Help Nepal Network (HeNN), Kathmandu, 2013–2016.

Installed and monitored electronic library, LINUX Server Terminal project (LTSP), in various remotely established governmental educational institutions.

Trainer, Community Education Project (CEP), Kathmandu University, Dhulikhel, 2013.

Trained government officials at the Ministry of Agricultural Department, District Agriculture Development Office, Charikot.

Research Interests

Machine Learning, Deep Learning, Natural Language Processing, Computer Vision

Preferred Tools/Libraries

Scikit-learn, NLTK, NumPy, Keras on top of TensorFlow, Anaconda, Spyder, gensim; Programming language: Python; OS: LINUX; LaTeX for Documentation

Publications

Conference papers

Rabindra Lamsal and T.V. Vijay Kumar. 2019. Artificial Intelligence and Early Warning Systems. *Global Symposium on Artificial Intelligence in Governance and Disaster Management.* March 11-13, 2019, New Delhi, India.

Rabindra Lamsal and T.V. Vijay Kumar. 2019. Artificial Intelligence based Disaster Response Systems. *Fourth World Congress on Disaster Management.* January 29-February 1, 2019, Indian Institute of Technology (IIT) Bombay, India.

Rabindra Lamsal and T.V. Vijay Kumar. 2018. Artificial Intelligence Based Early Warning System for Coastal Disasters. *International workshop on 'Reinforcing Coastal Zone Management: Saving Lives, Habitats and Livelihood of People'.* November 15-18, 2018, New Delhi, India.

Journal articles

Rabindra Lamsal and T.V. Vijay Kumar. 2019. Improving Twitter based Disaster Response using Deep Learning. (To be communicated)

Rabindra Lamsal and T.V. Vijay Kumar. 2019. Twitter based Disaster Response using Machine Learning. (To be communicated)

Rabindra Lamsal and T.V. Vijay Kumar. 2018. Classifying Emergency Tweets for Disaster Response. (Communicated).

Preprints at arXiv.org

Other documented research works (besides M.Tech Research)

Rabindra Lamsal and Shubham Katiyar. 2018. Determining Optimal Number of k-Clusters based on Predefined Level-of-Similarity. *arXiv preprint arXiv:1810.01878.*

Rabindra Lamsal and Ayesha Choudhary. 2018. Predicting Outcome of Indian Premier League (IPL) Matches Using Machine Learning. *arXiv preprint arXiv:1809.09813.*

Grants & allowances

Honorariums and allowances (2018-2019), Special Centre for Disaster Research, Jawaharlal Nehru University, New Delhi, India.

Travel and accommodation grant (2019) from the organizers of the Fourth World Congress on Disaster Management, Indian Institute of Technology (IIT) Bombay, Mumbai, India.

Academic projects

Twitter Based Disaster Response System

Disaster Response System targeted for Coastal disasters

Projects completed as a part of M.Tech dissertation.

Word Embeddings (Word2Vec Implementation) for Nepali Language

Word2Vec implementation of a Nepali language corpora having 100 million running words. The text corpora was designed by scrapping publicly available news content of various online Nepali news portals. The model has Word Embeddings for 0.5 million Nepali words.

Indian Premier League (IPL) Matches Prediction Model

A machine learning model capable of predicting the outcome of an IPL match, 15 minutes before the gameplay, immediately after the toss results. The prediction model was able to correctly predict 43 out of 60 matches of 2018 season. Project carried out as a part of the course *Artificial Intelligence*.

Fabrication of Microstrip Patch Antenna

A Microstrip Patch Antenna designed in MATLAB, simulated in Computer Simulation Tool (CST) and fabricated in Lab. Project carried out as a part of the course *Wireless Sensor Networks*.

Inventory Management System

A complete Inventory Management System, written in PHP and MySQL. Project carried out as a part of the course *Database Management Systems*.

Noise Buzzer

An embedded system capable of detecting noise, and triggering sound alarm whenever the noise is above a certain threshold value. Project carried out as a part of the course *Embedded Systems*.

Inventory Management System for DoCSE

A Java based inventory management system, designed as per the requirements of the Department of Computer Science and Engineering (DoCSE), Kathmandu University. Project carried out as a part of *Engineering Project*.

Duckworth-Lewis Calculator

An android application to calculate revised cricket scores after a game is interrupted due to rain. Project carried out as a part of *Engineering Project*.

Photochautari

A web based social networking platform for amateur photographers, written in PHP and MySQL. Project carried out as a part of *Engineering Project*.

GetMeTickets

A web based bus ticket reservation system, written in PHP and MySQL. Project carried out as a part of *Engineering Project*.

Car Racing Game

A C language based 2D car racing game, selected for showcasing at CAN Softech 2013, organized by Computer Association of Nepal. Project carried out as a part of *Engineering Project*.

Online courses

Machine Learning, offered by Stanford at Coursera.org. (11 weeks, 2018)
Neural Networks and Deep Learning, offered by deeplearning.ai. (4 weeks, 2019)
Financial aid was provided for both the courses.

Recent achievements in sports

First. Table Tennis Doubles. Chandrabhaga Hostel Sports Week 2019, Jawaharlal Nehru University, New Delhi
Runner-up. Table Tennis Singles. Chandrabhaga Hostel Sports Week 2019, Jawaharlal Nehru University, New Delhi

Voluntary works

Organized a Global Symposium (2019) on Artificial Intelligence in Governance & Disaster Management at Special Centre for Disaster Research.
Organized IT MEET (2016), Kathmandu University.
Contributed as System Developer at Sports Week (2016), Kathmandu University.
Organized various WordPress Workshops (2015 - 2016).
Volunteered in IT MEET (2014), Kathmandu University.
Executive Member (2013 - 2015) of Kathmandu University Computer Club.
Participated in Google Translate Community (2014).
Volunteered in National Workshop (2014) on the 'Primer Series on ICTD for Youth': Project Management and ICTD.
Organized IT MEET (2013), Kathmandu University.

Effort in Public awareness

Wrote for a tech news column in Nepal's National Daily – Annapurna Post (2016-2017)
The aim was to make the general public consciousness about the use of technology in their daily life. The topics included, but were not limited to, LINUX (51760), Navigation (57851), Android (54788, 54367, 57445), Web & Internet (59921, 55189, 56100, 55673).

Referees

Available upon request.

Last updated: July 24, 2019