

ABHISHEK PAUDEL

Fairfax, Virginia, USA
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EDUCATION

George Mason University, USA

August 2019 - Present

PhD in Computer Science

Department of Computer Science

Research Interests: Machine Learning, Computer Vision

Tribhuvan University, Institute of Engineering, Nepal

November 2013 - September 2017

Bachelor of Engineering, Computer Engineering

SKILLS

Programming Languages

Proficient in Python

Good Experience in C/C++

Familiar with JavaScript, Java, PHP, MATLAB & Assembly

Libraries & Frameworks

PyTorch, TensorFlow, Keras, scikit-learn,

NumPy, pandas, matplotlib

Web & Databases

HTML/CSS, Django, Nginx, SQL, MongoDB

Tools & Utilities

Git, LaTeX, Docker, Robot Operating System

Languages

English, Nepali, Hindi

WORK EXPERIENCE

United Nations Children's Fund (UNICEF) Nepal

January 2015 - August 2019

Technical Consultant

- Developed and deployed various SMS based applications along with real-time analytics.
- Provided technical support in development and deployment U-Report Nepal platform.
- Led the development and piloting of SMS based information dissemination and monitoring system for Nepal Government's social security program.
- Drafted technological and programmatic strategy to implement mobile phone based technologies for youth engagement in policy process.

TEACHING EXPERIENCE

George Mason University, USA

August 2019 - Present

Graduate Teaching Assistant

Affiliated with the Department of Computer Science in Volgenau School of Engineering. Courses assisted: CS682 (Computer Vision), SWE637 (Software Testing), CS584 (Theory and Applications of Data Mining), CS262 (Introduction to Low-Level Programming), CS222 (Computer Programming for Engineers) and CS112 (Introduction to Computer Programming).

MPercept Academy, Nepal

January 2019 - June 2019

Course Instructor

Taught introductory course on machine learning and data science along with designing and evaluating assignments and projects.

PUBLICATIONS

A. Paudel, B. R. Bajracharya, M. Ghimire, N. Bhattarai and D. S. Baral, “Using Personality Traits Information from Social Media for Music Recommendation,” *2018 IEEE 3rd International Conference on Computing, Communication and Security (ICCCS)*, 2018, pp.116-121. doi:10.1109/cccc.2018.8586831

PROJECTS

Room Classification on Floor Plan Graphs using Graph Neural Networks

An approach for improving room classification task on floor plan maps of buildings by representing floor plans as graphs and leveraging graph neural networks to predict room categories.

Sophisticated Students in Boston Mechanism and Gale-Shapley Algorithm for School Choice Problem

Simulation of the school choice problem for studying the effects of sophisticated students altering their preference lists with regards to Boston mechanism and student-proposing Gale-Shapley algorithm.

Experimental Evaluation of Activation Functions in Neural Networks

An empirical study of how various activation functions like sigmoid, tanh, ReLU, leaky ReLU, ELU and SELU affect the training performance and convergence in neural networks.

Monocular Depth Map Estimation

Estimation of depth map using single image based on NYU Depth Dataset v2 and Active Vision Dataset with deep learning based methods.

Pen Path Approximation on MNIST Digits

Extraction of a sequence of coordinate points along the path of digits from images of handwritten digits by making use of techniques like k-means clustering and mean squared error optimization.

2048 AI

An AI that solves the popular 2048 puzzle game using minimax optimization and alpha-beta pruning based on multiple heuristics.

AWARDS & ACHIEVEMENTS

Outstanding Graduate Teaching Assistant Award, George Mason University (2021)

Artificial Intelligence MicroMasters[®], Columbia University (2019)

First Nepal AI Winter School Scholarship (2018)

Fusemachines Artificial Intelligence Fellowship (2017)

Microsoft YouthSpark Challenge for Change Award (2015)

Microsoft Student Partner (2014)

EXTRA-CURRICULAR

AI Fellow, Fusemachines

Facilitator, AI for Social Good Workshop, Kathmandu Mini Maker Faire

Software Coordinator, LOCUS National Technological Festival

Event Coordinator, Hult Prize @ Tribhuvan University

Participant, Asia-Pacific HLM3 Youth Innovation Challenge Workshop (Malaysia)

Speaker, Global Innovations for Children and Youth Summit (Finland)

Volunteer, Me to We Youth Volunteer Trip (Kenya)