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PROFESSIONAL SUMMARY

Dedicated machine learning researcher with a focus on interpretability and transparency in AI systems. Possesses deep understanding in developing models that are both highly predictive and easily understandable, aiming to bridge the gap between complex algorithms and practical applications. Actively seeks to contribute to the advancement of machine learning through research, innovation, and collaboration in academic and applied settings.

EDUCATION

- A. PhD (Ongoing), Biomedical and Health Informatics, Case Western Reserve University, 2020-Present
- B. Master's Degree and Bachelor's Degree, Public Health, Tribhuvan University, Institute of Medicine, Kathmandu, Nepal 2017.

LICENSURE / CERTIFICATION

- L01. Nepal Health Professional Council, Kathmandu, Nepal *Registration No: 753 Jan PH* (MPH of Specialization level)

WORK EXPERIENCE

- W04. PhD Candidate, Research assistant, Sahoo's Lab, Case Western Reserve University, Department of Population and Quantitative Health Sciences, Cleveland, OH, August-2020-Present
- W03. Lecture, Tribhuvan University, Central Department of Public Health, Kathmandu, Nepal, 2017-2020
- W02. Nutrition Officer, Food and Agriculture Organization of the United Nations, Kathmandu Nepal, 2014-2015.
- W01. Community Health Quality Improvement Officer, Jhpiego /Health For Life, Kathmandu Nepal, 2013-2014.

HONORS AND AWARDS

- A04. PhD Dean's Scholarship, School of Medicine, Case Western Reserve University, 2020
- A03. First prize Poster Presentation, 5th Annual Scientific Symposium on Agriculture-Nutrition Pathways 2017
- A02. College Scholarship for studying Master of Public Health, Institute of Medicine, Maharajgunj Campus, Nepal in 2015
- A01. College Scholarship for studying Bachelors' Degree in Public Health, Institute of Medicine, Maharajgunj Campus, Nepal in 2009

PARTICIPATION IN PROFESSIONAL SOCIETIES

- P01. American Medical Informatics Association, MD USA
- P02. Life member- Nepal Public Health Association, Kathmandu, Nepal

EDITORIAL AND MANUSCRIPT REVIEW RESPONSIBILITIES

A. Journal Reviewer

- R07. Frontiers in Big Data
- R06. American Medical Informatics Association Symposium Reviewer
- R05. Frontiers in Public Health
- R04. PLoS One
- R03. International Journal of Public Health

B. Review Editor

- R02. Review Editor: Frontiers in Public Health (Infectious Diseases: Epidemiology and Prevention)
- R01. International Editor for MedS Alliance Journal of Medicine and Medical Sciences (MJMMS)

INVITED TALK

- I01. Current Research in Biomedical & Health Informatics: Monocyte Distribution Width in Severe Sepsis Prediction, Case Western Reserve University [March 10, 2023]

PUBLICATIONS AND SCHOLARLY WORK

A. Peer-reviewed Articles (hyperlinked)

1. **Upadhyaya, D. P.**, Tarabichi, Y., Prantzalos, K., Ayub, S., Kaelber, D. C., & Sahoo, S. S. (2023). Characterizing the Importance of Hematologic Biomarkers in Screening for Severe Sepsis using Machine Learning Interpretability Methods. *medRxiv*, 2023-05.
2. Prantzalos, K., **Upadhyaya, D.**, Shafiabadi, N., Fernandez-BacaVaca, G., Gurski, N., Yoshimoto, K., ... & Sahoo, S. S. (2023). MaTiLDA: An Integrated Machine Learning and Topological Data Analysis Platform for Brain Network Dynamics. In *PACIFIC SYMPOSIUM ON BIOCOMPUTING 2024* (pp. 65-80).
3. **Upadhyaya, D. P.**, Prantzalos, K., Thyagaraj, S., Shafiabadi, N., Fernandez-BacaVaca, G., Sivagnanam, S., ... & Sahoo, S. S. (2023). Machine Learning Interpretability Methods to Characterize Brain Network Dynamics in Epilepsy. *medRxiv*.
4. **Upadhyaya, D. P.**, Paudel, R., Acharya, D., Khoshnood, K., Lee, K., Park, J. H., ... & Adhikari, M. (2020, December). Frontline healthcare workers' knowledge and perception of COVID-19, and willingness to work during the pandemic in Nepal. In *Healthcare* (Vol. 8, No. 4, p. 554). MDPI.
5. Sharma, M., Khatri, B., Amatya, A., Subedi, N., **Upadhyaya, D. P.**, Sapkota, B. P., & Bista, P. (2023). Utilization of adolescent friendly health services and its associated factors among higher secondary students in mid-western Himalayan mountainous district of Nepal. *PLOS Global Public Health*, 3(3), e0001616.
6. Sahoo, S. S., Kobow, K., Zhang, J., Buchhalter, J., Dayyani, M., **Upadhyaya, D. P.**, Prantzalos, K., Bhattacharjee, M., Blumcke, I., Wiebe, S., & Lhatoo, S. D. (2022). Ontology-based feature engineering in machine learning workflows for heterogeneous epilepsy patient records. *Scientific reports*, 12(1), 19430.
7. Thapa, P., Poudyal, A., Poudel, R., **Upadhyaya, D. P.**, Timalisina, A., Bhandari, R., ... & Adhikari, N. (2022). Prevalence of low birth weight and its associated factors: Hospital based cross sectional study in Nepal. *PLOS Global Public Health*, 2(11), e0001220.
8. Adhikari, N., Acharya, K., **Upadhyaya, D. P.**, Pathak, S., Pokharel, S., & Pradhan, P. M. S. (2021). Infant and young child feeding practices and its associated factors among mothers of under two years children in a western hilly region of Nepal. *PloS one*, 16(12), e0261301.
9. Adhikari, M., Paudel, N. R., Mishra, S. R., Shrestha, A., & **Upadhyaya, D. P.** (2021). Patient satisfaction and its socio-demographic correlates in a tertiary public hospital in Nepal: a cross-sectional study. *BMC health services research*, 21, 1-10.
10. Adhikari, M., Chalise, B., Bista, B., Pandey, A. R., & **Upadhyaya, D. P.** (2020). Sociodemographic correlates of antenatal care visits in Nepal: results from Nepal Demographic and Health Survey 2016. *BMC Pregnancy and Childbirth*, 20(1), 1-10.

11. Paudel, R., Gurung, Y. B., Poudyal, A. K., Khatri, B., Bhatta, D. R., Acharya, D., ... & **Upadhyaya, D. P.** (2020). Socio-demographic and Healthcare-seeking Predictors of Undernutrition among Children Under-five Years of Age in a Western District of Nepal.
12. Timalina, A., Paudel, R., **Upadhyaya, D. P.**, Bhattacharya, S., Kuikel, B. S., Joshi, N. P., ... & Aung, A. A. (2020). Predictors of Multiple Micronutrient Powder Intake Adherence among Children Aged 6-23 Months in Rasuwa District, Nepal: A Cross-sectional Study. *Journal of Institute of Medicine Nepal (JIOMN)*, 42(2).
13. Paudel, R., & **Upadhyaya, D. P.** (2020). Initiation of contact tracing for Covid-19 at an academic institution for health science: initial experiences. *Journal of Chitwan Medical College*, 10(3), 109-110.

B. Oral presentation

O01. Sixth National Summit of Health and Population Scientists in Nepal, 6-7 July 2020, Katmandu, Nepal

O02. Frontline healthcare workers' knowledge and perception of COVID-19 and willingness to work during the pandemic in Nepal: a nationwide cross-sectional web-based study.

C. Poster presentation

P01. Fifth Annual Scientific Symposium on Agriculture-Nutrition Pathways, 9-13, July 2017, Kathmandu, Nepal. Is Dietary Diversity Associated with Anemia during Pregnancy in Nepal?

SKILLS

A. Software

S04. Analytic: SPSS, SAS, R

S03. Programming & web framework (Basic): Python, R, Java, Django

B. Language

L02. Native: Nepali

L01. Advanced: English