HITESH SAPKOTA

Resume

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Research Interests: Reinforcement Learning, Bayesian Learning, Multiple Instance Learning, Deep Learning, Distributionally Robust Optimization, Active Learning, Anomaly Detection, Openset Detection, Debiased Representation.

PUBLICATIONS

- Sapkota H., Yu Q. Balancing Bias and Variance for Active Weakly Supervised Learning. **KDD2022.**
- Sapkota H., Yu Q. Bayesian Nonparametric Submodular Video Partition for Robust Anomaly Detection. **CVPR2022.**
- Sapkota H., Ying Y., Chen F., Yu Q. Distributionally Robust Optimization for Deep Kernel Multiple Instance Learning. **AISTATS2021**.
- Wang D., Sapkota H., Liu X., Yu Q. Deep Reinforced Attention Regression for Partial Sketch Based Image Retrieval. **ICDM2021**.
- Alshangiti, M., Sapkota, H., Murukannaiah P.K., Liu X., Yu, Qi. Why is Developing Machine Learning Applications Challenging? A Study on Stack Overflow Posts. **ESEM 2019**.
- Sapkota, H., Murukannaiah P.K., Wang Y. A Network Centric Approach for Estimating Trust between Open Source Software Developers. **PLOS ONE 2019**.

EDUCATION

2017 - Present Ph.D. in Computing and Information Sciences. **GPA:** 3.84/4
Rochester Institute of Technology, Rochester, NY, USA.
Relevant Courses: *Deep Learning, Quantitative Foundation, Foundation of Intelligence System, Data Science.*

2012 - 2015 BE in Electronics and Communication Engineering. **Percentage:** 81%
Tribhuvan University, Institute of Engineering, Lalitpur, Nepal.
Relevant Courses: *Statistical Data Mining, Big Data Artificial Intelligence.*

EXPERIENCE

Applied Scientist Intern, Amazon, Hardware-Product Integrity
Amazon, Sunnyvale, CA *2022 MAY - 2022 AUG*

- Designed and Implemented embedding adaptation using attention-based architecture in gas sensor technologies leading to 6% improvement in the baseline.

Applied Scientist Intern, AWS, Support
Amazon, Seattle, WA *2021 JUN - 2021 AUG*

- Designed ML models to detect AWS service failures (issues) early before impacting customers significantly leading to 4% improvement in the competitive technique.

Research Assistant, Machine Learning and Data Intensive Computing
Rochester Institute of Technology, Rochester, NY *2017 AUG - Present*

- Developed Distributionally Robust Optimization (DRO) based Bayesian Multiple Instance Learning technique for Anomaly Detection.
- Developed Deep Reinforcement Learning technique for Partial Sketch based Image Retrieval.
- Developed Evidential Openset Detection techniques considering imbalance Classes and Few Shot Learning Setting.
- Designed Evidential based DRO technique for Openset Detection under Biased/Spurious Correlation Setting.

ACADEMIC AWARDS

- **KDD Travel Award (2022).** Financial support to travel and attend KDD2022 at Washington DC, USA.
- **RIT Ph.D. Merit Scholarship. (2017 - Today).** Financial support for Ph.D. at the Rochester Institute of Technology.
- **Ncell Scholarship and Excellence Award. (2014).** Financial support from Ncell for excellent academic performance in the Bachelor of Engineering, Institute of Engineering, Pulchowk Campus.

TECHNICAL SKILLS

- **Languages/Programming**: Python, Java, MATLAB, C/C++, R.
- **Deep Learning Packages:** Keras, Tensorflow, PyTorch, Caffe.