Kishan K C   Curriculum Vitae

Rochester Institute of Technology   kishankc.com.np

Golisano College of Computing and Information Sciences   kishan@mail.rit.edu

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Research Interests: Deep Learning; Graph Neural Networks; Computational Biology; Heterogeneous Data Integration.

EDUCATION

Ph.D., Golisano College of Computing and Information Sciences   **2016 – Present**
Rochester Institute of Technology (GPA: 4.0)   Rochester, New York
Thesis: Deep learning methods for the effective integration of
              heterogeneous biological data for genetic interaction network
              inference and gene function prediction.
Advisor: Dr. Rui Li and Dr. Anne Haake
Committee: Drs. Rui Li, Anne Haake, Feng Cui, Linwei Wang, Qi Yu

Bachelor of Engineering (B.E.), Computer Engineering   **2011 – 2015**
Central Campus Pulchowk, Tribhuwan University (GPA: 4.0)   Kathmandu, Nepal
Thesis: Agricultural Data Integration and Analysis – Analyzing
              heterogeneous factors that influence agriculture.

WORK EXPERIENCE

Human-Centric Multi-Modal Modelling Lab, RIT.   **Rochester, New York**
Research Assistant, Supervisor: Rui Li, Anne Haake   Aug 2016 – Present
   - Bayesian learning of deep neural network architecture to integrate
     diverse biological data for genetic interaction network inference and
     gene function prediction.

Research and Development, Verisk Information Technologies   **Kathmandu, Nepal**
Data Engineer   May 2015 - Jun 2016
Project: Medical Intelligence
   - Involved in requirement understanding and requirement-wise
     design.
   - Implemented clinical logic with PL/SQL package, function,
     procedure, triggers, etc.

Data Warehouse ETL Team, Yomari Inc. Pvt. Ltd.   **Lalitpur, Nepal**
Software Trainee   Oct 2014 – Apr 2015
Project: Express Enterprise Data Warehouse (EDW)
   - Developed ETL scripts to load data from multiple retail stores to the
     data warehouse.
   - Developed an ETL process validation framework to ensure the
     successful transfer of data from source to destination.
   - Created a wrapper function to automate the execution of test scripts
     and log output to database tables.

SCHOLARSHIPS, AND AWARDS

RIT Ph.D. Merit Scholarship. (2016 – Present). Financial support for Ph.D. studies at the Rochester Institute of Technology since August 2016.

Team of the Quarter (2017). Awarded in recognition of exceptional performance for developing norm framework – processing and integration. Awarded by the Verisk Information Technologies.

The Verisk Way to Go Award (2016). Received this award as the Data Engineer on the Medical Intelligence project for outstanding contribution. Awarded by the Verisk Information Technologies.

Rookie of the Year (2016). Awarded in recognition of exceptional performance among 70 new employees. Awarded by the Verisk Information Technologies.

The College Fellowship. (2011 – 2015). For academic merit and performance in each semester during the undergraduate studies. Awarded by the Institute of Engineering, Central Campus Pulchowk.

Academic Excellence Scholarship. (2011-2015). For excellent academic performance in the exams of six semesters (II, III, V, VI, VII, VIII) of Bachelor's in Engineering part of Computer Engineering. Awarded by the Institute of Engineering, Central Campus Pulchowk.

PUBLICATIONS

PEER-REVIEWED CONFERENCE PAPERS AND POSTERS

[C.2]   **Kishan K C**, Rui Li, Feng Cui, Qi Yu, Anne Haake. 2019. "GNE: A deep learning framework for gene network inference by aggregating biological information". The Asia Pacific Bioinformatics Conference. (APBC 2019).

[C.1]   **Kishan K C,** Rui Li, Feng Cui, Anne Haake. 2018. "Learning topology-preserving embedding for gene interaction networks". 17th European Conference on Computational Biology. (ECCB 2018). (Poster).

PREPRINTS

[P.1]   **Kishan K C**, Rui Li, Feng Cui, Anne Haake. 2019. "Interpretable Sparse Gaussian Embedding for Protein-Protein Interaction Prediction". In submission.

OTHER PRESENTATIONS

[Poster.3]   **A deep framework for aggregating heterogeneous biological information for gene network inference**
- Biological Data Science, Cold Spring Harbor Laboratory, 2018

[Poster.2]   **Gene Network Embedding.**
- New Deep Learning Techniques, IPAM, UCLA, 2018

[Poster.1]   **Reconstruction of Gene Regulatory Networks with Ensemble SVM.**
- AI@GCCIS: Golisano College Research & Innovation Showcase, RIT, 2017

[Talk.2]   **Deep Learning on Graphs.**
- Guest talk, Deep Learning Seminar, RIT, 2018

[Talk.1]   **Introduction to Neural Networks.**
- Guest talk, Statistical Machine Learning, RIT, 2018

SKILLS

Deep Learning Packages	PyTorch
Programming Languages	Python, Java, R
Other Skills	Scrum Agile Framework

CERTIFICATIONS

Data Science Certification, Coursera	2016
Statistical Learning, Stanford Online	2015

OPEN SOURCE PROJECTS

Gene Network Embedding (GNE)

Designed and developed a deep learning method that integrates network structure with gene expression data to learn interpretable embeddings and demonstrated the state-of-the-art performance in gene interaction inference.

 GNE
(TensorFlow)

Attentive Multimodal Tied Autoencoder (AMTAE)

Designed and implemented a new interpretable network fusion method with 73% fewer parameters than the state-of-the-art method (deepNF) and demonstrated comparable performance.

 AMTAE
(PyTorch)