

RASHIKA RAMOLA

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[Link to my Google Scholar Profile](#) [Link to my LinkedIn](#)

RESEARCH INTERESTS: Machine Learning, Data Science, Usability and Usefulness of Algorithms

EDUCATION

Northeastern University (GPA - 3.75/4)

Fall 2018 - present

Ph.D Student, Computer Science, Khoury College of Computer Science

Indiana University (GPA - 3.7/4)

Fall 2017- Summer 2018

Ph.D Student, Computer Science, Luddy School of Informatics, Computing and Engineering

Indian Institute of Technology Roorkee

2012 - 2016

Bachelor of Technology, Department of Biotechnology

PUBLICATIONS

Ramola, R., Jain, S., Radivojac, P.: Estimating classification accuracy in positive- unlabeled learning: characterization and correction strategies. Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing 24, 124–135 (2019)

Pagel KA, Chu H, Ramola R, et al. Association of Genetic Predisposition and Physical Activity With Risk of Gestational Diabetes in Nulliparous Women. *JAMA Netw Open.*;5(8):e2229158. doi:10.1001/jamanetworkopen.2022.29158 (2022)

Rashika Ramola, Iddo Friedberg, Predrag Radivojac, The field of protein function prediction as viewed by different domain scientists, *Bioinformatics Advances*, Volume 2, Issue 1, vbac057, <https://doi.org/10.1093/bioadv/vbac057> (2022)

Chu H, Ramola R, et al. Using Association Rules to Understand the Risk of Adverse Pregnancy Outcomes in a Diverse Population (Accepted for Pacific Symposium on Biocomputing 2023) (preprint - https://hoyinchu.github.io/files/Chu_PSB_2023_Camera_Ready.pdf)

INDUSTRY EXPERIENCE

Position: *Visiting Scientist* (as LEADERS Experiential PhD Fellow)

Company: Merck Research Laboratories

Jan 2021 - May 2021

Used network science methods to explore relationships between scientists, molecules and diseases by using data from experimental notebooks

Position: *Data Analyst*

Company: xtLytics, LLC

Jan 2017 - June 2017

Analyzed data of health insurance claims, sales and social media to provide 5P (patient, payer, product, physician and pharmacy) insights to a pharmaceutical company for the psoriasis drug market in the United States Suggestion: leading/top-10 generic drug company in the psoriasis space in the USA.

RESEARCH EXPERIENCE

Assessing the usability and value of protein function prediction algorithms

2019 - present

- Protein function prediction is one of the most important problems for the 21st century. Numerous experimental as well computational scientists are engaged in this work. Part of the computational biology community is engaged in developing algorithms for protein function prediction. We are interested in assessing the utility of these algorithms for the biologists by interviewing them and capturing their reactions to current state-of-the art protein function prediction methods.

Prediction of gestational diabetes in pregnant women

2019 - present

- Curated rich(including genomic) data from the nuMoM2b (“Nulliparous Pregnancy Outcomes Study: monitoring mothers-to-be”) study and learnt predictors for gestational diabetes
- Currently investigating the nutritional, physical activity and psychological dataset from this study to understand the relationship between these factors and how they play a role together in adverse pregnancy outcomes.

Estimation of classification accuracy in positive-unlabeled learning[Publication [1]]

2018

- Provided evidence that accuracy estimates like Matthews Correlation Coefficient, F-measure, balanced accuracy and accuracy can be wildly inaccurate in traditional positive-unlabeled learning, depending on the fraction of positive examples in the unlabeled data and the fraction of negative examples mislabeled as positives in the labeled data
- Proposed correction methods for these measures demonstrated that the knowledge or accurate estimates of class priors in the unlabeled data and noise in the labeled data are sufficient for the recovery of true classification performance.

TEACHING EXPERIENCE

- Spring 2020, Spring 2019: CS 6140 Machine Learning (Northeastern University)
- Fall 2017: CSCI-B365: Introduction to Data Analysis and Mining (Indiana University)

AWARDS

- Received Northeastern’s LEADERS Fellowship and was accepted to the LEADERS certificate program to engage in research with Merck Company during the Spring 2021
- Full funding to attend CRA-WP 2020 Grad Cohort for Women Workshop in New Orleans, Louisiana
- Selected for Summer Research Fellowship program 2014 of Indian Academy of Sciences, Bengaluru, Indian National Science Academy, New Delhi and The National Academy of Sciences, India, Allahabad

KEY COURSES

- Machine Learning, Data Mining, Artificial Intelligence, Advanced Database Concepts
- Theory of Computation, Distributed Systems, Human Computer Interaction
- Evolutionary Biology, American Healthcare System
- Leading Self and Others

SCHOOL SERVICE

- Graduate & Professional Student Government Representative, Indiana University (Sep 2017–May 2018)

IT SKILLS

Computer Languages: Python, C++, Latex

Operating systems: UNIX, linux, macos, Windows

OTHER INTERESTS

- Reading books (especially historical books), board games, dancing (sassy hiphop & bollywood; level - medium), travelling, social service (was very actively engaged in rural development in the undergrad years)