Somnath Rakshit

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CAREER OBJECTIVES

Seeking to gain knowledge, experience and serve in R&D. Working towards completing a Masters in Information Studies with Data Science specialization. Broadly interested in computer vision and natural language processing.

EDUCATIONAL QUALIFICATION

The University of Texas at Austin — *M.S.*
August 2019 - May 2021, ischool.utexas.edu
• GPA: 3.95 /4.0 • School of Information *(Data Science Specialization)*
• Coursework: Introduction to Machine Learning, Linear Models, AI in Health, Data Mining, Mathematical Statistics for Applications
• Teaching Assistant: *MIS 385N - User Generated Content Analytics (Fall 2019), EE 461P - Data Science Principles (Spring 2020), MIS 381N - Advanced Predictive Modelling (Fall 2020)*

Jalpaiguri Government Engineering College — *B.Tech.*
August 2014 - May 2018, jgec.ac.in
• GPA: 3.80 /4.0 • Computer Science and Engineering
• Coursework: Data Structures, Design and Analysis of Algorithms, Object Oriented Programming, Calculus, Discrete Mathematics, Probability and Statistics, Artificial intelligence
• Awards: Best Paper *(RTITM 2017, Jalpaiguri)*

SKILLS

Language
• Python, Java, C++

Frameworks
• Scikit-learn, Numpy, Pandas, Matplotlib, Spacy, PyTorch, Tensorflow, Keras

Databases
• SQL, Elasticsearch

Activities
• Reviewer: IEEE-EMBS BHI 2019, Elsevier Journal of Biomedical Informatics
• Member: *UT Intelligent Data Exploration and Analysis Laboratory* and *UT Computational Sensing and Imaging Laboratory*

WORK EXPERIENCE

Intelligent Data Exploration and Analysis Laboratory, Austin TX — *Graduate Research Assistant, Federated Learning (Summer 2020 - Ongoing)*
Project - Privacy-preserving federated learning using healthcare data *(Mentor: Prof. Joydeep Ghosh)*
• Computable COVID-19 subphenotype generation with tensor factorization.
• Subphenotype verification with biomedical literature and knowledge graphs.

Centre of New Technologies, LGFS Lab, University of Warsaw — *Research Assistant (Jan - Aug 2019)*
Project - Ranking genetic biomarkers for breast cancer subtypes *(Mentors: Dr. Indrajit Saha* and *Dr. Dariusz Plewczynski)*
• Developed a novel ranking algorithm using multi-objective genetic algorithm. Additionally, used differentially regulated genes to find the relation between the up/down regulation of genes and survival probability of a population.

Cyware Labs, Bangalore — *Software Engineer (July - Nov 2018)*
• Clustered similar articles and ranked by articles' importance using CNNs resulting in 2x no. of articles selected.
• Determined trending keywords using Named Entity Recognition from news articles.

RESEARCH PUBLICATIONS

• **Somnath Rakshit**, Indrajit Saha, Subha Shankar Chakraborty, Dariusz Plewczyński, **Deep Learning for Integrated Analysis of Breast Cancer Subtype Specific Multi-omics Data**, IEEE TENCON 2018
• **Somnath Rakshit**, Indrajit Saha, Michal Wlasnowolski, Ujjwal Maulik, Dariusz Plewczynski, **Deep Learning for Detection and Localization of Thoracic Diseases Using Chest X-Ray Imagery**, *International Conference on Artificial Intelligence and Soft Computing*