Somnath Rakshit

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CAREER OBJECTIVES

Seeking to gain knowledge, experience and serve in academic research. Working towards completing a Masters in Information Studies with Data Science specialization. Broadly interested in machine learning in healthcare.

EDUCATIONAL QUALIFICATION

The University of Texas at Austin — *M.S.*

August 2019 - May 2021, ischool.utexas.edu

- **GPA**: 3.95 /4.0 • Information Studies *(Data Science Specialization)*
- **Coursework**: Introduction to Machine Learning, Linear Models, AI in Health, Data Mining, Mathematical Statistics for Applications
- **Thesis**: Sequence parameter selection for MRI parameter mapping (Advisor: Dr. Jon Tamir)
- **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

WORK EXPERIENCE

Intelligent Data Exploration and Analysis Laboratory, UT Austin — *Research Assistant (May - Ongoing)*
  Project - Privacy-preserving federated learning using healthcare data *(Mentor: Prof. Joydeep Ghosh)*
- Computable COVID-19 subphenotype generation with tensor factorization.

Centre of New Technologies, University of Warsaw, Poland — *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 algorithms. Additionally, showed the relation between 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*

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