Somnath Rakshit

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EDUCATION

Master of Science, Information Studies (Data Science Track), May/2021
The University of Texas at Austin | GPA: 3.89/4 **| Courses taken:** Linear Models, Applied Encryption, AI in Health, Introduction to Machine Learning, Data Mining
Teaching Assistant: 1. MIS 385N -User Generated Content Analytics (Fall 2019), McCombs School of Business **2. EE 461P** -Data Science Principles (Spring 2020), Cockrell School of Engineering

Bachelor of Technology, Computer Science and Engineering, May/2018
Jalpaguri Government Engineering College, India | **GPA**: 8.68/10
Courses taken: Artificial intelligence, Data Structures, Calculus, Discrete Mathematics, Probability and Statistics, Design and Analysis of Algorithms, Object Oriented Programming

EXPERIENCE

Research Assistant, Centre of New Technologies, University of Warsaw, Jan/2019 – Aug/2019
- Classified thoracic diseases from unstructured images obtained from healthcare providers
- Quantified and ranked genes based on their expression data with regards to multiple cancer types

Visiting Reseacher, Institute of Informatics and Telematics, CNR Pisa, May/2019
- Developed a method of preprocessing a document within a biomedical corpus using Marisa Tries that improves classification metrics.
- Developed a novel meta-ranking ensemble method to combine multiple ranks into one for various genes.

- **Software Engineer, Cyware Labs, July/2018 – 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.

SKILLS

Programming Languages: Python, Java **| Frameworks**: PyTorch, Tensorflow, Keras, scikit-learn, Numpy, Scipy, Pandas, Matplotlib, Git, Django **| Databases**: SQL, Elasticsearch

PROJECTS AND PUBLICATIONS

VizWiz Challenge, Mar/2020 - Developing a method to caption images taken by people who are blind using a multi-modal dataset containing text and image data. Guide: Dr. Danna Gurari

Sequence parameter selection for MRI parameter mapping, **Mar/2020 (Ongoing)** - Using deep learning to find the optimal set of scan parameters to best estimate the tissue parameters during MRI acquisition. Guide: Dr. Jon Tamir

Generation of Clinically Accurate Chest X-Ray Reports Using Deep Learning, Sep/2019 (Ongoing) – Generating reports from unknown chest X ray images by using a dataset of images and their corresponding reports. Guides – Prof. Ying Ding and Prof. Nick Bryan

Nilavra Bhattacharya, **Somnath Rakshit**, Jacek Gwizdka & Paul Kogut, "Relevance Prediction from Eye-movements Using Semi-interpretable Convolutional Neural Networks", In Proceedings of CHIIR'2020, Vancouver, Canada

Somnath Rakshit, Indrajit Saha & Dariusz Plewczynski, "Deep Learning for Detection and Localization of Thoracic Diseases using Chest X Ray Imagery", In Proceedings of ICAISC 2019, June, 2019, Zakopane, Poland

ACTIVITIES

Reviewer: IEEE-EMBS BHI 2019, Elsevier Journal of Biomedical Informatics
Member, UT Natural Language Learning Group. Presented RoBERTa model in Fall 2019 session