Somnath Rakshit

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EDUCATION

Master of Science, Information Studies (Data Science Track), May 2021
The University of Texas at Austin | GPA: 3.95/4 **| 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
Jalpaiguri 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–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 Researcher, 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–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 – Developed a method to caption images taken by blind people using a multi-modal (text and image) dataset. Guide: Dr. Danna Gurari

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

Deep Stock Predictions, April 2020 – Designed a trading strategy that performs portfolio optimization using Bidirectional LSTM with customized loss function to predict stock price for four different companies.

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