

# Somnath Rakshit

+1 (737) 333-1713 | [somnath@utexas.edu](mailto:somnath@utexas.edu)

[somnathrakshit.github.io](https://somnathrakshit.github.io) | [linkedin.com/in/somnathrakshit/](https://linkedin.com/in/somnathrakshit/) | [github.com/somnathrakshit/](https://github.com/somnathrakshit/)

## EDUCATION

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### Master of Science, Information Studies, May/2021

The University of Texas at Austin | GPA: 3.89/4

Courses taken: Linear Models, Applied Encryption

### Bachelor of Technology, Computer Science and Engineering, May/2018

Jalpaguri Government Engineering College, India | GPA: 8.68/10

Courses taken: Artificial intelligence, Data Mining, Data Structures, Discrete Mathematics

## EXPERIENCE

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### Teaching Assistant, (User Generated Content Analytics), The University of Texas at Austin, Sep/2019 - Current

- Generating business insights from unstructured data including text and images using Python.
- Assisting students with course material and assignments in Machine Learning using Python during office hours.

### Researcher, Centre of New Technologies, University of Warsaw, Jan/2019 - Aug/2019

- Generated insights from unstructured images obtained from healthcare providers to classify cancer subtypes.
- Quantified and ranked genes based on their expression data with regard to multiple cancer types.

### 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 for quick understanding of important news.

## PUBLICATIONS AND PROJECTS

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

Indrajit Saha, **Somnath Rakshit**, Tanay Ghosh, "Machine Learning for Object Labelling", IEEE TENCON, July, 2018 Jeju Island, South Korea

**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](#).

**BioPortal, Sep/2019 (Ongoing)** - Building a web portal using PubMed database to see publication trends in scientific research for any author, bio-entitiy. **Guide:** [Prof. Ying Ding](#).

**Identifying Land Patterns from Satellite Imagery in Amazon Rainforest, Jan/2018** - Multi label classification of satellite images using Keras resulting in state of the art accuracy. **Guide:** [Dr. Dipak Kumar Kole](#)

**Detection and Localisation of Diabetic Retinopathy, April/2018** - Classification and localization of diabetic retinopathy using Keras in fundus images with 10x lesser training parameters achieving similar performance as the state of the art models. **Guides:** [Dr. Dipak Kumar Kole](#) and [Swalpa Kumar Roy](#).

## SKILLS

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

## ACTIVITIES

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Organizing member of [AI Health Data Challenge 2020](#)

Reviewer: IEEE-EMBS BHI 2019, Elsevier Journal of Biomedical Informatics

Secretary, Coders Club, Jalpaiguri Government Engineering College (Aug/2017 - May/2018)