Saranga Kingkor Mahanta

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Education

National Institute of Technology Silchar, India

CGPA: 9.04

BACHELOR OF TECHNOLOGY IN ELECTRONICS AND COMMUNICATION ENGINEERING

Aug. 2018 - June. 2022 (expected)

Army Public School Narangi, Assam, India

INTERMEDIATE SCIENCE (PHYSICS, CHEMISTRY, MATHEMATICS, COMPUTER SCIENCE)

2016 - 2018

Percentage: 92.6%

Sarala Birla Gyan Jyoti, Amingaon, Assam, India

CGPA: 10

MATRICULATION

2004 - 2016

Experience _____

University of Franche-Comté

Besançon, France

RESEARCH INTERN

Jan. 2022-Present

- Working under Dr. Raphaël Couturier
- · Working on Autoencoders and Object Detection algorithms to predict optimal clusters in unlabelled data

Aix-Marseille University colab. with NIT Silchar

Marseille, France | Silchar, India

RESEARCH INTERN

July 2021 - Sep. 2021

- Worked under Dr. Benoit Favre and Dr. Partha Pakray
- Formulated novel methods for efficiently evaluating summaries generated by Abstractive Text Summarization systems using Textual Entailment
- Compared summaries generated by a baseline Seq2Seq LSTM model having Attention mechanism with pre-trained BART-based text summarizer using proposed evaluation metric

Devopedia Bengaluru, India

DATA SCIENCE INTERN

Jun. 2021 - Aug. 2021

- Performed web scraping using BeautifulSoup and used Feed-forward Neural Networks to automatically identify Title, Author and Year (of publishing) entities from any webpage
- Constructed an end-to-end system using Python that generates Reference Citation strings in the Chicago Manual Style format from URL inputs

Publications

"Exploiting Cepstral Coefficients and CNN for Efficient Musical Instrument Classification"

Saranga Kingkor Mahanta, Nihar Jyoti Basisth , Eisha Halder, Abdullah Faiz Ur Rahman Khilji, Partha Pakray *Paper under review at Neural Computing and Applications*

"Textual Entailment as an Evaluation Metric for Abstractive Text Summarization"

Swagat Shubham Bhuyan, **Saranga Kingkor Mahanta**, Partha Pakray, Benoit Favre *Paper under review at Journal of Artificial Intelligence Research*

"COVID-19 Diagnosis from Cough Acoustics using ConvNets and Data Augmentation"

Saranga Kingkor Mahanta, Shubham Jain, Darsh Kaushik, Koushik Guha

Paper presented at IEEE International Conference on Advances in Computing and Future Communication
Technologies 2021 - MIET Meerut

"Deep Neural Network for Musical Instrument Recognition using MFCCs"

Saranga Kingkor Mahanta, Abdullah Khilji, Partha Pakray

Paper Published in **Computación y Sistemas**: Vol 25, No 2 (2021)

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Other Key Projects_

Forgery Detection and Image Retrieval using Robust Image Hashes

Oct. 2021 - Present

BACHELOR'S THESIS PROJECT

- Working under the supervision of Dr. Madhumita Paul
- Using Variational Autoencoders to generate robust image hashes of images
- Forgery detection by computing similarity of generated hash and received hash
- Exploiting hashes for efficient Image Retrieval

Spam, Random Text and Abusive Words Classifier

July 2020 - Aug. 2020

Github link

SMART INDIA HACKATHON 2020

- Built a Spam Classifier using Multinomial Naive Bayes algorithm
- Performed additional hardcoding to detect random gibberish texts and selected abusive words
- Deployed on the Web using Flask
- Integrated the classifier with main website presented at SIH-2020 Grand Finale

Positions of Responsibility _____

Machine Learning Club, NIT Silchar

NIT Silchar

SENIOR CORE MEMBER

Sep. 2019 - Present

- Club Objective- Providing mentorship to ML enthusiasts and develop the ML/DL culture in college
- Club activities include taking classes, hosting quizzes, interviews and ML hackathons
- Taught Machine Learning fundamentals to juniors and beginners

Achievements _____

2021	Bagged 1st position in the DiCOVA 2021 Challenge leaderboard for the Track 1 problem statement- COVID-19 diagnosis from cough sound recordings	DiCOVA 2021 Challenge
2020	Finalist in the National Crystal Ball 2020 Hackathon for the problem statement-prediction of delivery time of restaurants	Blue Yonder
2020	Grand Finalist in Smart India (SIH) Hackathon - 2020, organized by MHRD, Government of India. Built and incorporated with the main website a modified spam classifier, a time series forecasting instance using SARIMA, and a chatbot using Dialogflow	Sage University, Indore
2020	Organized Electro-hunt in Sprectrum 5.0 , the technical weekend of Electronics and Communication Society, NIT Silchar	NIT Silchar
2018	Winners of Robo-Soccer, Tecnoesis, the annual technical festival of NIT Silchar	NIT Silchar

Technical Strengths.

Computer Languages Python, C, C++, HTML, CSS

Software and Tools Git, LaTeX, gRPC

Libraries & Frameworks PyTorch, TensorFlow, Flask, NumPy, Pandas, Librosa, Scikit-learn

Domain Interests Artificial Intelligence, Deep Learning, Computer Vision, NLP, Generative Learning

Key Courses Undertaken _____

Computer Science & Engineering: Machine Learning, Neural Networks and Fuzzy Logic, Data Structures and Algorithms, Computer Networking, C Programming, Signals and Systems, Control Systems, Microprocessors, Digital Signal Processing, Machine Translation, Deep learning*, Generative Adversarial Networks *

Mathematics: Linear Algebra, Differential and Integral Calculus, Probability and Statistics, Random Processes

^{*}Specialization offered by Deeplearning.ai on Coursera