

SARANGA KINGKOR MAHANTA

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EDUCATION

National Institute of Technology, Silchar

BTech, Electronics and Communication Engineering

Aug. 2018- June 2022(expected)

Cummulative GPA (absolute): 8.32

Army Public School, Narangi

Science (Physics, Chemistry, Mathematics, Computer Science)

2016-2018

Percentage: 92.6%

WORK EXPERIENCE

The Sparks Foundation

Computer Vision Intern

Dec. 2020- Jan. 2021

- Fine-tuned VGG19 to build a real-time face mask detector. [Link to project](#)
- Exploited K-Means clustering to identify major colours in an image and search images having a particular colour via colour name. [Link to project](#)

Utkarshini Edutech, Bangalore

Machine Learning Research Intern

Dec. 2019 - Feb. 2020

- Worked under the guidance of Abhishek Kumar Jha, Operations Head
- Conducted a comparative study on Convolutional Neural Networks and various architectures: LeNet-5, AlexNet, VGG-16, GoogLeNet/Inception-v1-4, ResNet-50 , Xception, Inception-ResNet-V2
- Formulated pellucid documentations

Machine Learning Club, NIT Silchar

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

KEY PROJECTS

Musical Instrument Recognition using a Deep ANN

Guide: Dr. Partha Pakray

Dec. 2020 - Jan. 2021

Dept of CSE, NIT Silchar

- Extracted Mel-Frequency Cepstral Coefficients from monophonic audio clips
- Architected a deep ANN and achieved a new state-of-the-art accuracy on the London Philharmonic Orchestra Datasest
- [Link to project](#)

Perceptual Hashing Techniques and Image Recovery

Guide: Dr. Madhumita Paul

Dec. 2020 - Present

Dept of ECE, NIT Silchar

- Conducted an extensive literature survey on various Image Hashing techniques
- Working on image recovery from its hash after transmission through the channel using statistical and Machine Learning algorithms

Topic Extraction and Modelling from Online Chats

Guide: Dr. Partha Pakray

Aug. 2020 - Oct. 2020

Dept of CSE, NIT Silchar

- Implemented Latent Dirichlet Allocation (LDA) to cluster topics in text dialogues
- Generated WordClouds on day-wise segregated chats
- Locally deployed WordCloud Generator of Whatsapp Chat text files using Flask
- Link to project

Spam, Random Text and Abusive Words Classifier

July 2020 - Aug. 2020

For Smart India Hackathon 2020 Grand Finale

- Built a Spam Classifier using the Multinomial Naive Bayes algorithm
- Performed additional hardcoding to detect random gibberish texts and selected abusive words
- Deployed on the Web using Flask: <http://spamrandomclassifier.herokuapp.com/>
- Incorporated with main website presented in SIH-2020
- Link to project

Facial Expression Recognition

May 2020

- Architected a CNN to fairly classify among five emotions- Happy, Sad, Neutral, Angry and Surprise
- Real-time facial expression recognition through the webcam using OpenCV
- Link to project

PUBLICATIONS

Saranga Kingkor Mahanta, Abdullah Khilji, Partha Pakray. "Deep Neural Network for Musical Instrument Recognition using MFCCs". Under review at **5th International Conference on Advances in Computing and Data Sciences (ICACDS)-2021**

TECHNICAL STRENGTHS

Programming Languages	C/C++, Python, HTML5, CSS3, MATLAB
Software & Tools	Adobe Photoshop, MS Office, Latex, Git
Scripting and Query Languages	MySQL
Frameworks and Libraries	Tensorflow-Keras, Pytorch, Flask, Librosa, NLTK, OpenCV
Interests	Machine Learning, NLP, Computer Vision, Deepfakes

ACHIEVEMENTS

- Finalist in the National Crystal Ball 2020 Hackathon organized by Blue Yonder for the problem statement- prediction of delivery time of restaurants
- Grand Finalist in Smart India 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 the SARIMA model, and a chatbot using Dialogflow
- Organized Electro-hunt 2020 in Sprectrum 5.0 organized by Electronics and Communication Society, NIT Silchar
- Winners of Robo-Soccer, Tecnoesis 2018 in NIT Silchar
- Qualified to participate in the National Creativity Olympiad 2016 organized by the Indian Instituion of Engineers, Jamshedpur