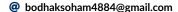
# SOHAM BODHAK

M.Sc. in Big Data Analytics

Ramakrishna Mission Vivekananda Educational and Research Institute, Belur Math, West Bengal, India



in Soham Bodhak

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#### **PROJECTS**

 Music Seperation: A deep learning based music source seperation project on MUSDB-18 dataset.

Tools: PyTorch, Streamlit

Jan.'25 - Apr.'25, RKMVERI

Faculty: Dr. Soumitra Samanta

Implemented and compared multiple music source separation techniques, including frequency thresholding, NMF-based spectrogram masking, Random Forest classification, and U-Net deep learning models, isolate audio stems with evaluation via SDR metrics.

 Movie Recommendation: Movie recommendation system using GCN, GAT, LightGCN.

Keywords: GCN, GAT, LightGCN

Jan.'25 - Apr.'25, RKMVERI

Faculty: Mr. Champak Dutta

 Developed and compared advanced recommendation systems using traditional collaborative filtering,GCN, GAT, and LightGCN, leveraging the MovieLens 100k dataset to model user-item interactions as graphs, demonstrating proficiency in graph-based deep learning and recommender system optimization with PyTorch and torch\_geometric.

• Bengali OCR: Bengali hand-written character recognition using LeNet5 and ResNet18 architectures.

**Keywords:** open-cv, LeNet, ResNet, Data pre-processing; 94.33% accuracy

Jan.'25 - Apr.'25,

**RKMVERI** 

Faculty: Br. Bhaswarachaitanya

 Developed and compared LeNet5 and ResNet18 deep learning models for Bengali OCR, achieving 94.33% validation accuracy with ResNet18, demonstrating proficiency in convolutional neural networks, data augmentation, and model optimization using PyTorch.

• Rainfall trend Prediction in WB: Prediction of rainfall in West Bengal based on historical weather data using ML techniques

**Keywords:** Python, Kaggle, Feature engineering, hyperparameter tuning; 83.5% accuracy

Aug.'24 - Nov.'24, RKMVERI

Faculty: Br. Bhaswarachaitanya

#### **EDUCATION**

 Ramakrishna Mission Vivekananda Educational and Research Institute, Howrah

M.Sc. in Big Data Analytics

(Rank: 4/27)

**2024** – Present

(Sem-1) CGPA: 7.96

Asutosh College Kolkata

B.Sc.(H) in Physics

**2**021 - 2024

CGPA: 7.547

Score: 95.2%

Howrah Vivekananda Institution

West Bengal Board of Higher Secondary Education(10+2)

**ä** 2021

West Bengal Board of Secondary Education (10)

**2**019 Score: 95.28%

#### **TECHNICAL SKILLS**

- Programming Languages:Python, C, R, Languages:Python, C, R, Languages
- Frameworks: Numpy, Scipy, Pandas, Scikit-Learn, Matplotlib, OpenCV, PyTorch, PyTorch-Gemometric, PySpark, Hadoop, Ray
- Tools:MS Office
- Operating System:Windows, Linux (Ubuntu)

## **HOBBY**

· Photography, Chess, Games

## **COURSEWORK**

- Data Structure & Algorithms
- · Joy of computing using Python
- Graph Database & Distributed Computing
- Deep Learning
- Natural Language Processing
- Computer Vision
- Artificial Intelligence

- Time Series & Survival Analysis
- Machine Learning
- Statistics
- Probability & Stochastic Process
- Java & Hadoop
- Econometrics & Finance
- Reinforcement Learning
- Universal Human Values

## **ACHIVEMENTS/CERTIFICATIONS**

- NPTEL: The Joy of Computing Using Python(Score: 88%) (Nov.'24)
- Youth Computer Training Centre (Gov. of WB): Advance Diploma in Information Technology Application (Score: 87.55%; Grade: A) (Sep.'21)