

# MANJIS MAJUMDAR

## Pursuing MSc. Big Data Analytics

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## ONGOING PROJECTS

Exact Computation of Chebyshev Centre for Compact Subsets in Euclidean Spaces

Summer Research Project under Dr. Debasish Chatterjee, C-MInDS, IIT Bombay

Mathematical Learning

- The Chebyshev trio (centre, ball, radius) for a closed compact set are computed. Applications in increasing the robustness of a neural network model.

Next Year Bankruptcy Prediction from Textual Data

Natural Language Processing

- Classical as well as neural baseline prediction models are applied, including results on next-year bankruptcy prediction from multiple years of textual data.

## COMPLETED PROJECTS

Branch Cash Retention Limit Optimization

Data Analyst Intern at PUNJAB NATIONAL BANK, HO, New Delhi

Time Series Forecasting

- Daily cash flow (receipt and pay) by Prophet time series model are predicted in Python.
- The Cash Retention Limit from the predicted values are derived by mathematical formulas.

Facial Emotion Recognition using Image Gradient histogram as a feature and CNN

Computer Vision

- Image gradients were calculated using OpenCV library for each pixel in an image.
- Histogram concatenation was done using the magnitude of the image gradients and the angle between them. This was treated as a feature for training the model. CNN was applied for improving the accuracy.

Income Prediction on US Census Data

Linear Regression and Optimization Algorithms

- Income tract wise of US Census data was predicted using regression
- The data set was divided in terms of population, white people percentage and average income and the predicted income was compared between the categories.
- Different gradient based optimization algorithms were applied for each of the cases and the results were compared.

Impact of COVID-19 on Social Media

EDA

- Data Visualisation and Analysis on primary data collected through google forms using R and Python

## EDUCATION

M.Sc in Big Data Analytics

RKMVERI

Sept 2021 – Present

CGPA: 6.51

B.Sc Mathematics(Hons.)

Ramakrishna Mission Vidyamandira

March 2018 – April 2021

CGPA: 7.83

Intermediate

Ramjas School

May 2017 – April 2018

86%

## TOOLS

Python

SQL

R

Prophet

Scikit-Learn

Matplotlib

Numpy

Pandas

Pytorch

OpenCV

MS Office

Latex

## SKILLS

Probability & Statistics

Data Visualisation

ML

DL

Optimization

## CERIFICATIONS

- SQL for Data Analytics

## INTERESTS

- Trained on Hindustani Classical Instrumental Music (Sarod)
- Solving Rubik's Cube
- Playing Table Tennis