ADARSH KUMAR

Third Year Undergraduate at IIT Kharagpur

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EDUCATION

Indian Institute of Technology Kharagpur

Integrated MSc. in Mathematics and Computing

July 2018 – Present Kharagpur, West Bengal

CGPA - 9.69/10.0, Department Rank: 3

Neehar Meera Senior Secondary School

12TH, CBSE Boards

March 2018 Aligarh, India

Perctange - 96%

St. Fidelis Senior Secondary School

10TH, CBSE Boards

March 2016 Aligarh, India

CGPA - 10.0/10.0

SKILLS

C/C++, Python, Julia
JavaScript, HTML and CSS, PHP, Matlab
Git, Numpy, Scipy, Pandas, OpenCV
Tensorflow, Keras, FluxML - Julia

COURSEWORK

Genetic Algorithms for Engineering Processes

By Prof.Nirupam Chakraborti, as a Breadth Course

January 2020 – May 2020 Offline

Design and Analysis of Algorithms

By Prof. Sourav Mukhopadhyaya, as a Depth Course

July 2019 – Nov 2019 Offline

Image Processing

By Prof. KS RAO, as Additional Course

July 2019 – Nov 2019 Offline

Introduction to Machine Learning

By Andrew NG, Coursera

May 2019 Online

Deep Learning Specialization

By Andrew NG, Deeplearning.ai, Coursera

May 2019 – July 2019 Online

Machine Learning A-Z

With Python, Course on Udemy

April 2019 – May 2019 Online

PROJECTS

Automated Music Generation

- A case study of various Deep Learning Algorithms and Model Architectures for Automatic Music Composition. Implemented with Tensorflow and Keras, the project involves study of performance of LSTM, BiLSTM, Attention based models and Transformers with MIDI based Datasets. WIP

FluxGAN

- Implemented an Open Source Project consisting of a collection of different GAN models implemented and optimized using Flux, a Julia Package for Deep Learning. WIP.

Metrics.jl

- Developed an Open Sourced Julia package for analysis of Deep Learning Models performance, including Advanced metrics for Deep Learning models assessment like Rouge, BLEU Score.

Generative Art with Cellular Automata

- Conducted an exploratory study on methods for Generation of abstract designs and patterns using Cellular Automaton centered around 'Stepping Stone' rule and 'Cyclic Cellular Automaton' rule for pattern generation, involving Cross-Over and Mutations across Neighborhood Schemes.

DeepViz.jl

- Developed an Open Sourced Julia package for CNN Visualizations to enhance Model Interpretability and Explainability. WIP

Movie Recommendation System

- Developed a User-user and Item- Item Collaborative filtering based Movie Recommendation System.

ACHIEVEMENTS

- Secured 3rd Position in Open IIT Data Analytics, a college level Data Analytics Competiton.
- Achieved a place among top 8 in Hackerearth Data Science Challenge 2019.
- Secured Jee Advanced 2018 AIR 1048, and Jee Main 2018 AIR 1780.
- Secured District Rank 3rd with Rank 1 in Science stream in AISSCE.
- Cleared KVPY twice with KVPY-SA AIR 472 and KVPY-SX AIR 975.
- Qualified National Standard Examination for Chemistry (NSEC) and Astronomy(NSEA) with a rank among top 1 percentile of the Nation

HOBBIES

- Exploring New Fields and areas, singing, playing Musical Instruments, playing Badminton.