VISHAL GAUR

Indian Institute of Science Education and Research, Mohali

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EDUCATION

BS-MS Dual degree , CPI- 8.30/10
Major - Physics, Minor - Data Science

Indian Institute of Science Education and Research, Mohali

July 2016 – May 2021

Higher Secondary (CBSE) - 93.2%

Delhi Public School, NTPC, Dadri, U.P

2015

Secondary (CBSE) - CPI- 9.0

Delhi Public School, NTPC, Dadri, U.P

2013

RESEARCH INTERNSHIPS

Junior Research Fellow, IISER-M

May 2021 – Oct 2021 Mohali , India

- Computational Astrophysics: A detailed analytical study of theoretical and observational aspects of Ultra-Compact X-ray Binaries.

MS Dissertation, IISER-M

May 2020 – May 2021 Mohali , India

- High Energy Astrophysics: Study of X-ray binaries using large datasets obtained from several X-ray observatories.

Research Intern, IISER-M

May 2017–July 2020 Mohali, Bangalore, Pune

- Radio, Optical, UV, and X-ray data analysis: Studied the basic aspects of investigative research and used a variety of mathematical tools, softwares, and programming languages to analyse the astronomical datasets.

SCHOLASTIC ACHIEVEMENTS

- TOEFL iBT Score: 102/120 (Reading-28, Listening-27, Speaking-25, Writing-22)
- Cleared CSIR-UGC NET(National Eligibility Test) For Junior Research Fellowship (JRF)
- 2019-2021 - The Astronomy Club, IISERM.
- 2016-2021 - Inspire Scholarship Holder, DST, Govt. of India
- 2013-2015 - Scholar badge holder in School, Delhi Public School.

EXTRACURRICULAR ACTIVITIES

- Won hackathons at IISER-M and IIT-Mandi.
- Organised Astronomy events and camps at IISER-M.
- Organised Robotics and Electronics workshops.
- Playing badminton, music.
- Making/Designing recreational electronics circuit.

DATA SCIENCE PROJECTS

News Articles Recommender System

- Created a corpus of 10,000 news articles using python web scrapping and implemented content based and collaborative filtering approaches for creating a personalised news recommendation algorithm.

IBM HR Analytics Employee Attrition Classification

- Implemented various supervised classification algorithms on the IBM employee dataset (personal data of each employee) followed by hyperparameter tuning of the models to classify employees based on attrition.

MNIST handwritten digit classification using neural network

- Created a 2-layer neural network from scratch using Python and trained it to recognize handwritten digits, using the MNIST dataset.

Video Sentiment analysis using Keras and Tensorflow

- A Convolutional neural network was used to identify the emotions of the subject using dlib and openCV. The RAVDESS video data set was used for this purpose.

Stock market predictor model using Machine learning

- Different classifiers along with Recurrent neural network was used to find a correlation between international news and stock market (Dow Jones Industrial Average).

Frame level speech recognition system

- Created a speech recognition engine using deep learning algorithm. The training data comprised of raw mel spectrograms and their frame level phenome state labels.

TECHNICAL SKILLS

- Python and C++
- Data analytics using R (Beginner)
- Bash Scripting
- Excel, MATLAB, Latex, GNUPLOT, Mathematica.

RELEVANT COURSES

- Machine Learning (NLP and unsupervised learning)
- Introduction to Data Science and Deep learning
- Biocomputing, Probability and Statistics