

# JAWAHAR C

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## RESEARCH EXPERIENCE

### Sleep Apnea Detection

Python, OpenCV

January 2021 – present

- Designed a service to track the Region of Interest and automatically detect sleep apnea (ROI).
- Added Python scripts to experiments to run them under various testing situations to show how accurate and effective they were, achieving a 93 % accuracy rate.
- Studied methods for automatically changing the area of focus inside the picture, and employed the Canny Edge Detection Algorithm and Gaussian Blur to find noise-free body edges.

### COVID-19 Mutation Rate Analysis with LSTM

Python, RNN

July 2021 – present

- Examined the patient's full genome sequence's mutation rate with a loss of less than 1.03 %.
- When compared to other nucleotides, a significant amount of thymine (T) and adenine (A) nucleotides are altered.
- To estimate the future mutation rate, a Long Short-Term Memory (LSTM) model based on Recurrent Neural Networks (RNN) was used.

## PROJECTS

### Metabolic Pathway Class Prediction

Graph Convolutional Networks

November 2021 – December 2021

- Used Graph Convolutional Networks (GCN), a hybrid graph-based deep learning model, to predict the classes of molecules' metabolic pathways.
- Directly extracted significant shape characteristics from input SMILES representations using RDKit.
- Contributed to the Multi-Classification of compounds into several pathway classes, demonstrating innovation by attaining 97 % accuracy.
- Created a web application that allows users to enter a compound of their choice and displays the expected class results from the trained GCN model.

### MBTI – Indicator based Personality Type Prediction

Python, ML

December 2021 – January 2022

- Used social media material to predict a person's personality and did it with 95.53 percent accuracy.
- Classified people's personalities using the Myers-Briggs personality type indicator (MBTI).

## EDUCATION

B.Tech in Computer Science With  
Specialization in Artificial  
Intelligence

Amrita Vishwa Vidyapeetham, Chennai

July 2020 – Present

CGPA: 8.15

Class XII

Narayana E-Techno School

march 2020

86%

## SKILLS

C/C++

Python (proficient)

JAVA (intermediate)

MATLAB

HTML/CSS (worked)

Git

DeepLearning (Keras,Tensorflow)

Machine Learning

MySQL

Big Data Analytics (Hadoop,Spark)

Data science

OpenCV

numpy

scipy

Scikit-Learn

## COURSEWORK

- Data Structures and Algorithms
- Object- Oriented Programming
- Database Management Systems
- Python for Machine Learning
- Operating Systems
- Formal Languages and Automata theory

## CONTRIBUTIONS

- Coordinator at Neuronix, an Amrita University technical club where we host hackathons, symposiums, and other technical activities.
- As a volunteer with Bhumi NGO, I helped 39 parents submit RTE applications as part of my social responsibility activities, securing the admission of 16 children in year 2021.

## CERTIFICATIONS

- C and Data Structures.
- Google data analytics (coursera)