

EDUCATION AND SCHOLASTIC ACHIEVEMENTS

Program	Institution	%/CGPA	Completion
M Tech ,Computer Science and Engineering	Indian Institute of Engineering science and Technology(IEST) , Shibpur	9.76	2022
B Tech ,Information Technology Class XII	Jalpaiguri Govt. Engineering College M.N.H.S	8.53 87.6%	2020 2016

- Secured AIR **4100** in **GATE CS/IT 2020** by IIT DELHI (**out of 1,00,000+ candidates**)
- Ranked amongst **Top 5.7%** in WBJEE (**out of 1,30,000+ candidates**)

PROJECTS and RESEARCH EXPERIENCE

Guide : Prof. Dr. Sekhar Mandal (IEST,Shibpur)

Lung Cancer detection using 3DCNN

- This thesis claims to **detect nodules** and its **position** from the **3d CT scan** images .Objective of this thesis is to maximize the **accuracy** and reduction of **false positive** cases (databases used are **LUNA-16** and **LIDC-IDRI** dataset).
- In Preprocessing segmentation **thresholding** or **watershed** segmentation is used ,in this thesis I tried to implement deep learning architectures like **U-Net** , ResNet , AlexNet and different modified **3D-CNN** versions. Libraries used are **Keras , Pandas , Numpy , Tensorflow ,OpenCV, Scikit-Image**.
- Loss and the **Activation function** used are **Binary Cross-entropy** or log loss , **ReLU** in the hidden layer and **Softmax** in the output layer.

Guide : Prof. Dr. Aditya Kr Samanta (J.G.E.C)

Automatic Vehicle Number Plate Recognition System

- Objective of this project is to extract the plate number from an image .For this first perform **blurring** using **bilateral filter** then graying the image then perform **edge detection** using **canny edge method** from OpenCV,from it detect out rectangular object to find number plate using **contouring** in OpenCV.
- Perform **OCR** using **pytesseract** package on **segmented** number plate image.
- Modules used are **numpy , pandas , OpenCV(cv2) ,pytesseract , For plate detection training KNN** algorithms with **log loss** function and **ReLU** and **sigmoid** as activation function is used.

XML to HTML conversion using LEX and YACC

- Here to create the **parser** and **lexical analyzer** I use **Yacc** and **Flex** tools in C language provided by **Bison Interface**.Each **token** verifies by LEX and each **stream of token** verifies through **yacc** to produce the corresponding **HTML** code of **XML** input ,erroneous case handled by **error handler** and error statement produce to **stdout**.

SKILLS

Languages and web - C/C++ , Python ,LISP , LEX , YACC , PROLOG ,HTML , MySQL ,MS office.

Libraries - Numpy , Pandas , Tensorflow , OpenCV , Keras , Scikit image .

Software - Git , Linux, Virtual Simulator, MySQL workbench ,DBeaver, Jupyter Notebook ,CLion.

Subject - Data structure and algorithms , Operating system , Adv DBMS , Deep Learning , Compiler Design , Graph Theory ,Networks.

EXTRA-CURRICULAR ACTIVITIES

- Art , singing , Robotics(Participate in several robotics challenges using arduino and sensors at college level).
- Competitive coding at codechef , Leetcode , hackerrank , hackerearth ,GFG . Good programming and algorithm skills in C++ , small games using the tkinter library .