

# SHIVAM SINGH

ACADEMIC PROFILE			
Degree/Certificate	Institution	Percentage/CGPA	Year
IDD	Bio-Medical Engineering IIT (BHU), Varanasi	6.99	2024
CBSE (XII)	SHIVJOYTI CONVENT SCHOOL	71.40	2019
CBSE (X)	BABA KADERA SINGH VIDYA MANDIR	89.30	2017
SKILLS			
<b>Skills</b> <ul style="list-style-type: none"><li>• <b>Languages</b>   Python,C#,C++,MATLAB,MySQL</li><li>• <b>Tools and Technologies</b>   Pandas,NumPy,SciKit-Learn,NLTK,Tensorflow, Matplotlib,VS Code,Pycharm,Jupyter Notebook.</li><li>• <b>Areas of Interest</b>   Data Structures and Algorithms, Machine Learning, Deep Learning, Statistics, Artificial Intelligence.</li><li>• <b>Relevant Courses</b>   Introduction to Data Science in Python(univ. of Michigan/Coursera), Python For Data Science and Machine Learning Bootcamp(Udemy ).</li></ul>			
PROJECTS			
<b>MNIST Dataset Project</b>		Jun 2022 - Aug 2022	
<i>flipped/correction orientation classification using contour feature extraction using it as a feature of RotetNet</i>			
<b>-Image preprocessing</b>   Image converted to grayscale ,again binary_thresholding to Modify Image data values to 1 and 0.			
<b>-Data preparation</b>   RotetNetDataGenerator generates image data with batch_size 64 and it randomly selected rotated image and store their angle of rotation as a dependent variable.			
<b>-Model-Network</b>   4-convolution layer network along with sigmoid function at last layer ,along with categorial_cross entropy and achieved accuracy 56%			
<b>-Conclusion</b>   Contours could help in identify orientation of text in better way and we can add more features like "edge detection" to increase performance			
<b>Undergraduated project I</b>		Jan 2022-Oct 2022	
<i>multimodel Brain Tumor Segmentation using CNN</i>			
<b>-Data Transformation</b>   Features are scaled to standardically between 0 and 1 by MinMaxScaler.			
<b>- Data sampling</b>   Both image and mask file patch in batchs by calling custom data generator to yield them.			
<b>-Data preparetion</b>   Weight initialized according to averagely calculated class weights with their respective classes			
<b>-Model-Architecture</b>   10layer CNN network established on 5 feature class input and achieved 0.86 IOU metrics with tunned hyperparameter( diceloss and focal loss ) to appropriately counter the class imbalance data.			
POSITION OF RESPONSIBILITY			
<b>P.O.R</b>			
<b>-Co-ordinator</b> -Supernova Event ,Technex 2022			
consulted with other quiz master and coorinated to arrangements for Supernova Event Sub-Event Astro-Quiz.			
HONOURS AND ACHIEVEMENTS			
<b>Honours and Achievements</b>			
<b>-Secured 1st place</b> in Silver Zone Science olympiad 2016			
<b>-Secured 5th place</b> in State level Silver Zone Science olympiad 2017			

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