

# Mehthab Saheba Shaik

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[cheapkai](#)

## Education

- 2016–2020 **B.Tech. (Hons.), Electronics and Communications Engineering**, *International Institute of Information Technology (IIIT)*, Hyderabad, India, *CGPA - 7.95/10*.
- 2014–2016 **Senior Secondary, Telangana Board of Intermediate Education**, *Sri Chaitanya Junior College*, Hyderabad, India, *Percentage - 96.3*.
- 2012–2014 **Secondary, ICSE**, *Gitanjali Senior School*, Hyderabad, India, *Percentage - 95.33*.

## skills

C, C++, C sharp, Q sharp, CUDA, Python, embedded C, arduino, OpenCV, MATLAB, Node.js, SQL, pytorch, tensorflow, keras

## Teaching Assisstantships

Data Visualisation Course TA for Spring 2020.

Digital Systems and Microcontrollers course TA for Fall 2018.

## Projects

C, **Linux Shell**.

[\[link\]](#) Created a bash shell with features like piping, redirection, background & foreground processes, etc.

Python, **Dropbox**.

[\[link\]](#) Used socket programming to develop a dropbox like application that downloads files from a peers storage directory and vice-versa.

Python, **Bombberman**.

[\[link\]](#) Terminal-based game without the help of any User Interface library like ncurses, pygame, etc.

C++, CUDA, **Parallel Recommender System**.

[\[link\]](#) Implemented parallel SVD for learning recommender matrix.

Python, torch, **ANI-1 5 Molecules**.

[\[link\]](#) Implemented ANI-1 model using 5 NNPs to predict atomic energies from Bahler-Parinello Symmetry functions of molecules.

**[Non-Technical] Too Short to Mushroom**.

[\[link\]](#) Designed a Board game using elements from chess and ludo.

Python, tf **ANN-GA**.

[\[link\]](#) Optimized Neural Net model with genetic algorithm on mammographic masses dataset.

Python, pytorch **Band-Gap Prediction of Perovskites**.

[\[link\]](#) m-smot on small dataset and classifier models /transfer learning.

MATLAB **SM-NNC-PNLMT**.

Tested set-membership and non-uniform centric constraints on proportionate NLMT.

Python **Upward Mobility of villages in India and correlation with caste[ONGOIN]**.

Digital Humanities Project - SHRUG is the dataset used.

Python,OpenCV **Image stitching[ONGOING]**.

Ongoing still need to study and decide on the algorithm.

C++,Python **Incremental frequent subgraph mining[ONGOING]**.

Implementation and Comparison of three state-of-the-art frequent subgraph mining algorithms for large evolving dynamic Graphs- MARGIN,AGS an IncFSM a survey of FSM algorithms.

## Deep Learning Projects

Python,tf **Colorization of b/w images.**

[\[link\]](#) Implemented a model,residual autoencoder with some modifications ,on flower dataset from tf.

Python,pytorch **Generative-Image-Inpainting.**

[\[link\]](#) Implemented a model as stated in [this paper](#),Wasserstein GAN(WGAN-GP) modified with contextual attention.

Python, **Auto-complete.**

[\[link\]](#) Implemented a class that gives suggestions to entered(passed) phrase from a corpus of sentences preprocessed using suffix tree

Python, **Neural-network based autocomplete.**

[\[link\]](#) Python code autocomplete using LSTM-RNN model.

Python,pytorch, **Deep-Photo-Styletransfer.**

[\[link\]](#) Implemented the model in this paper of semantic segmentation ,closed form matting etc.

## Other (second year/older) Projects

Cadence **CMOS modelling with given parameters.**

Designed CMOS using parameters such as ICMR,PMRR,energy-leak,power,noise to signal ratio etc using cadence.

Verilog **BASIC MIPS32 processor.**

ALU on 5-bits and multipliers ,shift-registers and datalines implemented in verilog,deployed on Xilinx fpga.

Matlab **Acoustic Room shape geometry detection.**

Implemented an algorithm to detect room shape assuming cuboid geometry sizes lengths are estimated using room inverse responses ,RIRs from multiple sources provided as datasets described [here](#)

## Relevant Courses Taken

Statistical Methods in AI,Computer Programming,Data Structures, Algorithms and operating Systems,ML for Natural Sciences, Adaptive Signal Processing,Discrete Mathematics, Communication Networks,Intro to Parallel Scientific Computing,Topics in Applied Optimization, Mobile Robotics, Computer Vision, Digital Humanities Project,Honors Project.

## Ranks

JEE Advanced : 5773,JEE mains : 5993,mains score : 236,advanced score :139