

EDUCATION

Birla Institute of Technology and Science, Pilani

BE in Electronics and Instrumentation Engineering, CGPA: 8.31/10.0

Goa, India

2018–Current

Tata Chem DAV Public School

XIIth, Percentage: 96.60%

Babrara, India

2015–2017

- District Topper in PCM for 2017 AISSCE

PROJECTS

auto-grad *numpy*

- Toy Deep learning library with numpy as only dependency. Includes automatic differentiation and implementation of various optimizers like SGD, Momentum, Adagrad and Adam, and linear models. [Link to the repo.](#)

Car Speed Detection *pytorch*

- Part of commaai speed challenge, uses fine tuned VGG to detect speed of car from its dashcam. Achieves an RMSE of 7 kmph in validation set. [Link to the repo on github.](#)

Neural Style Transfer *pytorch*

- Inspired by Gatys et al, 2016 *Image Style Transfer Using Convolutional Neural Networks*, uses VGG16 with Gram Matrix loss to transfer style in image. [Link to the repo on github.](#)

Emotion Detection using ML and Graph Network Analysis *sklearn, networkx*

- Under Prof JK Sahoo in collaboration with Cognitive Neuroscience Lab (BITS Pilani, Goa). Identify emotional response of brain using using ML with graph network analysis

SleepSort *pytorch*

- Sleep Stage Scoring from raw single channel eeg data, uses 2 parallel conv nets and addresses medical problems associated with the change in eeg data. Part of BITS F315 Intro to Cognitive Neuroscience

LyricMe *pytorch*

- Implementation of Character Level RNN on lyrics generation using a single word. [Link to the repo on github.](#)

CopyCat - Lite Text Editor in C

- Text editor in C without any external dependencies. Supports syntax highlighting for various languages. [Link to the repo on github.](#)

OPEN SOURCE CONTRIBUTION

KD Lib

SAiDL

- Implementation and bench-marking of various knowledge distillation techniques including Vanilla KD, PKT, RKD, etc. [Link to the repo on github: Here](#)

MLPack - A Machine Learning Library in C++

MLPack

- Contributing in free time since Oct 2019. Extending callbacks, implementing silhouette score metric, utility functions, etc. [Link to the repo on github: Here](#)

EXPERIENCE

Student Welfare Division

Lead Backend Developer

BITS Goa
Feb'19–Current

- Revamped college website, hosted here
- Leading the back-end development team for website
- Added features for online MCN form filling, mess option filling: full list here

SKILLS

- **Programming Languages:** C/C++, Python, Bash, SQL, MATLAB, Java
- **Frameworks:** pytorch, tensorflow, flask, django, reactJS
- **Other:** AutoCAD, Git, L^AT_EX
- **Operating System:** Ubuntu, Windows
- **Languages:** English, Hindi, Urdu

RELVANT COURSES

- **Mathematics:** Mathematics I (Calculus), Mathematics II (Linear Algebra and Complex Analysis), Mathematics III (Differential Equations), Probability and Statistics, Statistical Inference and Applications ¹, Discrete Mathematics ¹
- **ML/AI:** Machine Learning (Stanford - Online), CS231n Convolutional Neural Networks for Visual Recognition (Stanford - Online), Deep Learning Specialization (5 Courses) (Coursera, deeplearning.ai)
- **Other:** Signal and Systems, Control Systems, Intro to Cognitive Neuroscience, Computational Physics ¹

VOLUNTEERING

- Teaching and Mentoring at **Abhigyaan** Sep 2018–May 2020
NGO which teaches underprivileged people from in and around campus daily

¹*: Ongoing