Mohd Khizir Siddiqui

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EDUCATION

Birla Institute of Technology and Science, Pilani   Goa, India
BE in Electronics and Instrumentation Engineering, CGPA: 8.20/10.0   2018–Current

Tata Chem DAV Public School   Babrala, India
XIIth, Percentage: 96.60%   2015-–2017
  − District Topper in PCM for 2017 AISSCE

PROJECTS

auto-grad *numpy*
- Deep learning library with numpy as only dependency. Includes automatic differentiation and implementation of various optimizers like SGD, Momentum, Adagrad and Adam. Link to the repo on github.

Car Speed Detection *pytorch*
- Part of commai speed challenge, uses fine tuned VGG to detect speed of car 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

National Institute of Oceanography   Goa, India
Research Intern under Mr Pramod Maurya   July 2020–Current

- Identification of Marine Life in Indian Ocean
- Deploying deeplearning architecture on audio signals for end-to-end classification of marine species

Bhaskaracharya Institute of Space Applications and Geoinformatics   Gandhinagar, India
Part of team of Dr. DK Jhala   May 2020–July 2020

- Predicting time series data
- Use of machine learning models to predict the future values.
- Achieved a satisfactory RMSE across all datasets under study

Student Welfare Division   BITS Goa
Lead Backend Developer   Feb'19–Current

- Revamping college website
- Leads the team for backend development of website
- Replaced the older website with faster, user friendly website

SKILLS

- **Programming Languages:** C/C++, Python, Bash, SQL, MATLAB, Java
- **Frameworks:** pytorch, tensorflow, flask, django, reactJS
- **Other:** AutoCAD, Git, LaTeX
- **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

- **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

VOLUNTEERING

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