KSHITIJ PARIKH

NeuroAI
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Education

Indian Institute of Technology, Jodhpur **July 2019 – May 2023**
B.Tech in Computer Science and Engineering, CGPA ***8.10/10*** *Jodhpur, Rajasthan*

Bright VIP School **June 2017 – May 2019**
Higher Secondary Education, GSEB, Percentage: ***88.77 %*** *Vadodara, Gujarat*

Bright Ambalal School **May 2017**
Secondary Education, GSEB, Percentage: ***89.86 %*** *Vadodara, Gujarat*

Publications

- **Composite Sketch+ Text Queries for Retrieving Objects with Elusive Names and Complex Interactions**
  Prajwal Gatti, ***Kshitij Parikh****, Dhriti Prasanna Paul, Manish Gupta, Anand Mishra*
  In Proceedings of AAAI 2024

Research Experience/Projects

Multi Modal Based Query Image Retrieval | ***Dr. Anand Mishra*** — *IIT Jodhpur* **January 2022 - July 2023**

- **Curation of a database** for the Sketch + Text-Based Image Retrieval
- Adapted SOTA image retrieval models based on sketch only, text only, and sketch + text models.
- Gained hands-on experience in creating novel task-specific architectures.
- This led to a publication in AAAI2024 (A* Venue)

Blood Cell Classification and Malaria Detection | ***Dr. Mayank Vatsa*** — *IIT Jodhpur* **March - May 2022**

- Data processing for Blood Cell Classification and Malaria Detection images using Digital Image processing such as **enhancement and segmentation**. Conducted detailed experiments to **the effectiveness of Feature Extraction** using ResNet-50 and **transfer learning** to various pre-trained CNN architectures.

Automatic Speaker Verification and Spoofing Counter Measures | ***Dr. Richa Singh*** — *IIT Jodhpur* **June - July 2021**

- Analysed the SOTA Machine Learning algorithms for **audio forgery detection**.
- Worked on implementation of different **TTS models** for generating audio deepfake to be used for training dataset for **detection model**. Worked with **Tacotron 2** to generate an end-to-end text-to-speech model for generating audio spoofs.
- Obtained experience on working with **NVIDIA DGX2.**

Multi class Image Classification on the CIFAR-10 | ***Dr. Richa Singh*** — *IIT Jodhpur* **March - May 2021**

- Successfully implemented an **end to end pipeline** of **various ML algorithms** such as **SVM, MLP, Random Forest** all using Sklearn, CNN using Tensor Flows with and without **dimensionality reduction using PCA** and analysis of various different aspects using Pandas and Numpy in Python.

Technical Skills

Programming Languages: Python, C, C++, , SQL
Libraries: Pytorch, Tensorflow, Numpy, Sklearn, OpenCV, Matplotlib, Pandas
Technologies/Frameworks: GitHub, Docker, Kubernetes, MATLAB

Relevant Coursework

- Real Analysis and Multi-Variable Calculus
- Linear Algebra and Ordinary Differential Equation
- Probability, Statistics and Stochastic Process
- Maths for Computing
- Pattern Recognition and Machine Learning
- Natural Language Processing
- Computer Vision
- Deep Learning
- Dependable AI
- Optimization for Machine Learning
- Machine Learning for Big Data
- Speech Processing

Teaching Experience

- Teaching Assistant, of course, Computer Network with class size 180+ taught to 3rd and 4th year Bachelor students. Responsibilities involved conducting quizzes/class tests, checking papers, and conducting labs.