Jasmeet Singh

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Medium: https://medium.com/@sjasmeet135

ACADEMIC QUALIFICATION

Bachelor of Engineering in **Electronics and Communication**, Bennett University; Aggregate/CGPA: 7.93, August 23'

WORK EXPERIENCE

Deep Learning Research Intern Bennett University, Greater Noida ***Mar'22- Dec'22***

- Utilized Python libraries such as Plotly, pythreejs, and matplotlib to implement data visualization techniques, specifically generating interactive 3D pose points.
- Conducted a comprehensive study on various pre-existing Image Super Resolution models across multiple datasets.
- Summarized the study findings by preparing tables and diagrams and evaluating PSNR, SSIM scores

Research Intern IIT KGP (KLIV) ***Feb'23 – Jun'23***

- Implemented and analysed computer vision techniques to successfully reconstruct 3D scenes from 2D images and videos within both semi supervised and unsupervised environments.
- Conducted comprehensive research and experimentation to explore the utilization of State-of-the-art techniques, employing statistical methods to design experiments and evaluate performance.
- Evaluated and synthesized findings into concise block diagrams and tables for clear presentation of results.

ACADEMIC PROJECTS

Title: RGB to Hyperspectral Imaging

Team size: 3

GitHub link: https://github.com/jasmeetsingh-028/RGB2HSI

Description:

- Analysed models like HSCNN+ for insights into functionality.
- Developed an 8-layer 2D Convolved autoencoder to transform RGB images to 31 channels.
- Used NTIRE Spectral Reconstruction Dataset for spectral matching; evaluated performance using training loss, value loss, and mean squared error.

Title: Domain Adaptation with CycleGAN

GitHub Link: https://github.com/jasmeetsingh-028/Domain-Adaptation-using-Cycle-GAN-

Description:

- Created a CycleGAN-based project for domain adaptation.

- Implemented adversarial training with cyclic consistency loss for unpaired data mappings.
- Enhanced model robustness and adaptability for various applications.

Title: Neural Style Transfer
GitHub Link: https://github.com/jasmeetsingh-028/Neural-Style-Transfer-using-VGG19
Description:

- Developed a Neural Style Transfer project using the VGG19 model.
- Used convolutional neural networks and transfer learning to blend style with content images.
- Minimized style and content losses for seamless image generation.

PAPER SUBMISSIONS

1. **Track Name:** Archives of Computational Methods in Engineering
   Paper Title: Deep learning based Single Image Super-Resolution: A comprehensive survey
   Description: This paper reviews deep learning-based algorithms for single image super-resolution (SISR), highlighting key components, learning strategies, datasets, and quality assessment metrics. Future insights are presented for improved performance with low computational cost.
   Authors: Ankit Shukla, Avinash Upadhyay, Jasmeet Singh, Manoj Sharma.

2. **Track Name:** ICCV2023
   Paper Title: Absolute 3D Pose Estimation from Multi-View Synchronized Videos Using Transformer-based 3D Pose Baseline for Temporal and Spatial Coherence.
   Primary Subject: Human pose/shape estimation.
   Authors: Avinash Upadhyay(Primary), Ankit Shukla, Udyan Sharma, Jasmeet Singh, Manoj Sharma.

SKILLS

Technical Skills:

Languages: Python, SQL, MATLAB, C, C++, HTML.

Libraries and Packages:

Machine Learning and Deep Learning*: ScikitLearn, Pandas, Numpy, Pytorch, Keras. Tensorflow*.
Data Visualization: *Matplotlib, Seaborn, Plotly, pythreejs.*
Image Processing: *OpenCV, Pillow, ScikitImage.*
Others: *Tkinter, BeautifulSoup. pymysql, Selenium.*
Tools: *VS code, Jupyter Notebook, Tableau, MS Excel, Power BI, GitHub*.

CERTIFICATIONS

- Generative AI with Lare Language Models, DeepLearning.AI
- Convolutional Neural Networks, DeepLearning.AI
- Deep Neural Networks with PyTorch, IBM skills Network
- Linear Algebra and Calculus for Data Science and Machine Learning, DeepLearning.AI