ESHA PAHWA

Member of Technical Staff - I at Adobe Systems, India

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WORK EXPERIENCE

Member of Technical Staff - I
Adobe Systems
📅 July 2023 - Present   ⚲ Noida, Uttar Pradesh India

- Actively involved in the backend development of the integration of Adobe's in-house generative AI tools for auto-generating marketing emails for Adobe Campaign.
- Proficiently deployed **MobileNet model** and successfully achieved the objective of selectively incorporating images containing objects.
- Accomplished this deployment with remarkable efficiency, achieving an impressive **inference time of 0.02 seconds**.

Research Associate
Google Research
📅 Jan 2023 - July 2023   ⚲ Bangalore, Karnataka India

- Worked on enhancing product retrieval in **Google Shopping Ads** based on user query via Tensorflow, and **conducted detailed result analysis** to identify areas for potential improvement.
- Transformed the implementation to **JAX**, employing both **data parallelism and model parallelism**, drastically **reducing training time from 9 hours to just 14 minutes** per epoch.

Visiting Researcher
Computer Vision Center
📅 Aug 2022 - Dec 2022   ⚲ Barcelona, Spain

- Detected mode collapse issue within ProjectedGAN, a prevalent GAN variant, prompting the **design of an innovative architecture called ProjectedGAN++**.
- Enhanced adaptability to test datasets through the integration of pre-trained autoencoders using unsupervised learning, **reducing FID by 28.64%-55% for various datasets.**

Summer Research Intern
Adobe Systems
📅 May 2022 – August 2022   ⚲ Noida, Uttar Pradesh India

- Implemented **lookalike modeling** while leveraging second-party data of different campaigns belonging to different customers.
- Successfully submitted a patent document focusing on segment prediction of one customer's data using another customer's data in a **privacy-preserving manner.**

Research Intern
VCG group, Harvard University
📅 Feb 2022 – May 2022   ⚲ Cambridge, Massachusetts USA

- Pioneered the domain of **interpretable super-resolution**, introducing innovative texture classifiers and autoencoders that underwent rigorous assessment across distinct datasets for cross-training and cross-testing.
- Contributed to the unexplored frontier of computer vision by delving into **dataset-distillation** techniques for super-resolution.

SELECTED PUBLICATIONS

- *MedSkip: Medical Report Generation using Skip Connections and Integrated Attention*:- **E Pahwa***, D Mehta*, S Kapadia*, D Jain*, A Luthra; **ICCV workshop - CVAMD 2021 (presented in ICCV proceedings)**
- *LVRNet: Lightweight Image Restoration for Aerial Images Under Low Visibility*:- **E Pahwa***, A Luthra*, P Narang; **AAAI 2023 Student Abstract**
- *Conditional RGBT Fusion for Effective Crowd Counting*:- **E Pahwa***, S Kapadia*, A Luthra*, S Shreyas*; **IEEE ICIP 2022**
- *DroneAttention: Sparse weighted temporal attention for drone-camera based activity recognition*:- S K Yadav, A Luthra, **E Pahwa**, K Tiwari, H Rathore, H Pandey, P Corcoran; **Neural Networks Journal (Impact Factor: 9.657)**.

ACHIEVEMENTS

🏆 **Adobe WIT Scholarship 2022**
Was awarded the Adobe WIT scholarship India 2022 along with 5 other recipients across India.

📈 **ARTPARK IISc Grant**
Was selected for IISc grant out of the whole batch in my department.

🏆 **Grace Hopper Celebration Scholarship 2021**
Was provided an amazing opportunity to be a part of the world's biggest gathering of women in computing.

📈 **CVRS**
Founder of Computer Vision Research Society, BITS Pilani with the aim of promoting research culture at my college.

EDUCATION

B.E. in Computer Science, M.Sc. in Chemistry
BITS, Pilani
📅 2018-2023   Current CGPA: 8.38/10

ISC 12th Board Examinationss
Shikshantar School
📅 2016-2018   Percentage: 98.4/100

ICSE 10th Board Examinations
Shikshantar School
📅 2014-2016   Percentage: 97.8/100

COURSEWORK

- Deep Learning
- Introduction to Machine Learning
- Object Oriented Programming
- Database Management Systems
- Data Structures and Algorithms
- Operating Systems

SKILLS

JAX · Java · Python · C · MySQL · Numpy · Pandas · Pytorch · Tensorflow · Keras · HTML/CSS · Linux · Windows · Flask · Git

MISCELLANEOUS

- Reviewer at ICCV CVAMD 2023 and ECCV MCV 2022
- Teaching Assistant in the course Neural Networks and Fuzzy Logic (NNFL)
- Completed individual projects such as AQI Prediction and Diabetic Retinopathy Detection