

Shubham Kaushal

Machine Learning Engineer | India

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Skills

Data & ML/AI: Scikit-Learn, Numpy, Pandas, Keras, MySQL
Computer Vision: Image Processing (OpenCV, Albumentation), PyTorch (Detectron2)
Programming Skills: Data Structures and Algorithms (Python), Parallel Processing (Ray)
Machine Learning ★ Data Analysis ★ Data Visualisation ★ Computer Vision ★ Object Detection

Experiences

Machine Learning Engineer | Finarb Consulting Pvt. Ltd. Oct, 2021 - Mar, 2022

- *Object-detection*: Increasing relative accuracy from 80 to >90% of skewed data using image processing
- *Improved code runtime* for detection from 0.3 to >10 objects/s using OpenCV instead of DNNs
- *Parallel feature extraction and Image Augmentation* of millions of images using Ray and Albumentation
- *Transfer Learning* using SSD and Faster RCNN

Exposure: Computer Vision, Image Processing, Image Augmentation

Embedded Software Developer | Intern | IIT Bombay 2018 - 2020

- *Developed Python toolkit* modelling the Earth's atmosphere, using real time data-analysis (sensors)
- *Developed BUFR encoder and decoder* to relay meteorological data (remote devices <> workstation)

Exposure: Binary representation for relaying data (BUFR), Encoder, Decoder, Software Management

Education

Indian Institute of Technology (IIT), Bombay 2017-2021
B.Tech. | Aerospace Engineering

Relevant Coursework: Data Analysis and Interpretation, Calculus, Linear Algebra, Numerical Analysis

Projects

Denoising images | CNN model | [Project](#) 2021

- *Built an Autoencoder* using deep CNNs, for noise reduction and clean image generation
- Studying the effect of various optimizers for denoising and testing different models for the task

Exposure: Autoencoders, Image Denoising

Extracurricular Activities

Overall Coordinator | GRA, IIT Bombay 2019-2020

- *Guided 50+ volunteers* to weeklong camps to understand the grassroot issues & policies in rural India
- *Coordinated sessions with* Anna Hazare, Popatrao Pawar, Mahesh Sharma, and other social reformers

Cycling: Personal Best - 94 KM non-stop completed in ~6 hours.

Basic Mountaineering Course (BMC): Completed a 26-day training in rock craft, snow craft and ice craft.
Worked in a team to win the "Best Rope" and was awarded as A-grade trainee.

NSS, IIT Bombay: Completed 80 hours of community work (Green Campus)