

MACHINE LEARNING IN FASHION
CLASSIFICATION OF INDIAN CLASSICAL SAREES

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PROJECT PROPOSAL

Aim: To implement Computer vision algorithms which can classify Indian classical sarees.

Dataset: To be scraped from web using the selenium, BeautifulSoup libraries in python

Idea: To try out a multitude of image sensing paradigms and find out the one that is best suited to classify Indian Sarees.

Papers:

- ▶ Jain, H., Patil, R., Jethva, U., Kaoshik, R., Agarawal, S., Dutta, R., & Batra, N. (2021). Generative Fashion for Indian Clothing. Proceedings of the 3rd ACM India Joint International Conference on Data Science & Management of Data (8th ACM IKDD CODS & 26th COMAD).
<https://doi.org/10.1145/3430984.3431057>
- ▶ Chen, L., Li, S., Bai, Q., Yang, J., Jiang, S., & Miao, Y. (2021). Review of image classification algorithms based on Convolutional Neural Networks. Remote Sensing, 13(22), 4712.
<https://doi.org/10.3390/rs13224712>

PROJECT PROPOSAL

The Team:

- ▶ Ritadip Bharati: Batch 19, SPS.
- ▶ Sudip Kumar Kar: Batch 19, SPS

Work division: As there are many algorithms and all of them are independent, we'll divide the algorithms among ourselves and try to implement them.

Mid-way expectation: To be able to classify saree images through Lightweight methods like MobileNet, MobileNetV3, ECA-Net etc.

Baseline implementation: To understand Convolutional Neural Networks(CNN) and various optimiser algorithms(GD, Adaptive moment Estimation etc.) via implementation of some algorithms based on these.

Final Goal: To train classification algorithms like ResNet, CoAtNet, EfficientNet etc and find ones to be good at identifying all Indian Classical sarees in our dataset.