Title: Deep Learning Models for Acne Recognition

Abstract: Acne is a common skin problem that affects many people. To diagnose it, it is important to assess the severity of the condition. Dermatologists often use different scales and criteria to do this. It is proposed to use various deep learning models to speed up this process. The main task is to develop and evaluate detection models for acne recognition.

Datasets: A brief description of data in the computational experiment and. Links to the datasets. The datasets shall be open-source. The data shall be ready-to-model.

1. ACNE04 dataset with labels and bounding boxes that was proposed in [1].
2. The dataset of self-portraits of individuals with labels.

References: Papers with a fast intro and the basic solution to compare.

1. The formulation of the problem in the medical domain: [2].
2. A baseline: `https://arxiv.org/abs/1907.07901`.

Basic solution: The code of the baseline algorithm is proposed in `https://github.com/microsoft/nestle-acne-assessment`.

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References

[1] Xiaoping Wu, Ni Wen, Jie Liang, Yu-Kun Lai, Dongyu She, Ming-Ming Cheng, and Jufeng Yang. Joint acne image grading and counting via label distribution learning. In *Proceedings of the IEEE/CVF international conference on computer vision*, pages 10642–10651, 2019.

[2] Amol Doshi, Ahmed Zaheer, and Matthew J. Stiller. A comparison of current acne grading systems and proposal of a novel system. *International Journal of Dermatology*, 36(6):416–418, 1997.