

Gender Classification using Convolutional Neural Network

Artificial Intelligence
CS-E

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Motivation: What problem are you tackling and why it is important to solve that problem?

Ans: Face is one of the most imperative biometric attributes. Thus, face evaluation can help to gather great information such as gender. Therefore, a successful gender classification can help us boost performance in certain applications such as face recognition, smart computer human-interface, and computer-aided psychological analysis.

To understand information regarding male/female characteristics is an interesting task with an additional benefit of contributing to the community of data science and machine learning. Thus, we feel gender classification is a great motivation to carry forward.

Method: What are some of the AI or machine learning techniques/methods you are planning to Use?

Ans: We intend to make gender classifiers using various techniques including Convolutional Neural Networks and decision tree method. We will train our classifiers on various data sets.

Training a machine learning system to identify men and women in digital images

TRAINING
TESTING



Setting up

Researchers began with an untrained software system and a collection of images of faces that human coders labeled by gender. Some of the images were used to train the system, and some were set aside to later test the system and evaluate its ability to identify gender.

Training

Researchers then showed the system the labeled training set of images, allowing it to develop its own rules for identifying images of men and women.

Testing

Once the system was trained, researchers showed it the testing set of images, but with the human-coded labels hidden. The system then labeled each image as male or female. To evaluate the system's performance, researchers compared the system's decisions to those of the human coders.

"The Challenges of Using Machine Learning to Identify Gender in Images"

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Experiments: What are some of the experiments that you intend to perform?

Ans: We will apply both the classifiers i.e CNN and Decision Tree on various data sets and will compare the efficiency of both classifiers. Moreover, after finding results we will try to make the classifiers more efficient by any smarter and efficient code snippets.