How old do you sound ? — Automatic estimation of your perceptual age —

Nobuaki MINEMATSU, Keikichi HIROSE, and Keita YAMAUCHI

The University of Tokyo

7-3-10, Hongo, Bunkyo-ku, Tokyo 113-0033, Japan e-mail: {mine,hirose,kta-yama}@gavo.t.u-tokyo.ac.jp/ http://www.gavo.t.u-tokyo.ac.jp/

Can machine perceive age from your speech ?

Human interface based on speech technologies has been remarkably advanced for the last decade. However, there are lots of differences between two kinds of communication, human-to-human and human-to-machine. Most of the current spoken dialogue systems try to capture everything from results of automatic recognition of users' speech. In the case of human-to-human communication, it is apparent that they receive various kinds of non-verbal information from the users' speech. Among those kinds of information, we are focusing on "age", which is not the use's *biological* age, but his/her *perceptual* age. In other words, we are trying to estimate "how old the user sounds."

In the demonstration, we show you what were prepared to fulfill this work in addition to our tentative system of perceptual age estimator. Before the development, we collected data of perceptual age of speech uttered by people covering a wide range of age. In the experiment, we asked subjects to estimate the age of the speaker (perceptual age). You can hear speech samples and also see perceptual age labels assigned to the samples. Do you find any differences between "your" perceptual age of the speaker and the label ?

Our tentative perceptual age estimator was built based upon speaker recognition, i.e., speaker modeling, techniques. Using the labels of perceptual age of the individual speakers, we classified the speakers into several groups according to their perceptual age. Using the model of each of the speaker groups, the perceptual age is estimated by looking at the likelihood scores calculated by the individual models.

Warning : Need not be pessimistic if the estimated age is larger than you expect. It is just *machine* perception. Inversely, don't be optimistic if it is smaller than you expect. Human affairs are very difficult problems as you know !!

N. Minematsu, M. Sekiguchi, and K. Hirose,

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