

# AEYES: ADVERTISING BASED ON GENDER AND AGE Proposal

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## ABSTRACT

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Advertising is an integral part of any company's promotion mix; All the companies use advertising as one of the major elements of their entire communication plan. The effect of advertisements relays mainly on age group and gender, because interest differ with age and gender. In this project we will build a deep learning model to predict people age and gender in order to determine the type of advertisement that is most suitable for display.

AEyes (Advertisement Eyes): is advertisement company that uses Machine Learning to utilizes their advertisements.

## Question/need

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Predicting the most appropriate advertising to display depending on age and gender to assist companies in developing an accurate advertising strategy

## DATA

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UTKFace dataset is a large-scale face dataset with long age span (range from 0 to 116 years old). The dataset consists of over 20,000 face images with annotations of age, gender, and ethnicity. The images cover large variation in pose, facial expression, illumination, occlusion, resolution, etc. The labels of each face image is embedded in the file name, formatted like [age]\_[gender]\_[race]\_[date&time].jpg

## ALGORITHM

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1. Importing libraries and upload data.
2. Extract each image labels (age, gender) of each image name.
3. EDA on the data (visualize age and gender distribution).
4. Reformat images shape.
5. Splitting the data 20\80
6. Build and train model (CNN model used)
7. Evaluate model
8. Test images prediction

## TOOLS

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- Pandas library.
- Keras
- Matplotlib
- TensorFlow
- NumPy
- OpenCV