

Age & Gender Classification

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Age- and Gender Classification @ The Profiler

The screenshot displays the 'The Profiler' web application interface. At the top left is the 'PROFILER' logo. The top navigation bar contains three icons: a magnifying glass, a gear, and a document. The main content area is titled 'Analyse-Ergebnis' and includes instructions: 'Betrachte dein persönliches Analyse-Ergebnis.', 'Klicke [PDF icon] um einen Kurzbericht als pdf herunterzuladen', and 'oder klicke [Refresh icon] um eine neue Suche zu starten'. In the top right corner, there is a user profile icon and a red 'Aus' button. Below the text, three face images are shown side-by-side. The middle image is highlighted with a red border and has a 'DETAILS' label. Below the middle image, a white box contains the text 'weiblich, fröhlich'. Each image has a status bar at the bottom with icons for Google, a face, and a cat, followed by the age: '51 Jahre', '44 Jahre', and '45 Jahre' respectively.

PROFILER

Analyse-Ergebnis

Betrachte dein persönliches Analyse-Ergebnis.

Klicke [PDF icon] um einen Kurzbericht als pdf herunterzuladen

oder klicke [Refresh icon] um eine neue Suche zu starten

Aus

51 Jahre

44 Jahre

45 Jahre

DETAILS

weiblich, fröhlich

Project Outline

- Age & Gender Classification for *The Profiler*
- Deep Learning (Keras on Theano)
- Age in groups of 10 years

- IMDb & Wiki dataset
- >500,000 annotated face crops available

IMDb & Wiki Dataset

IMDb



460,723 images

Wikipedia



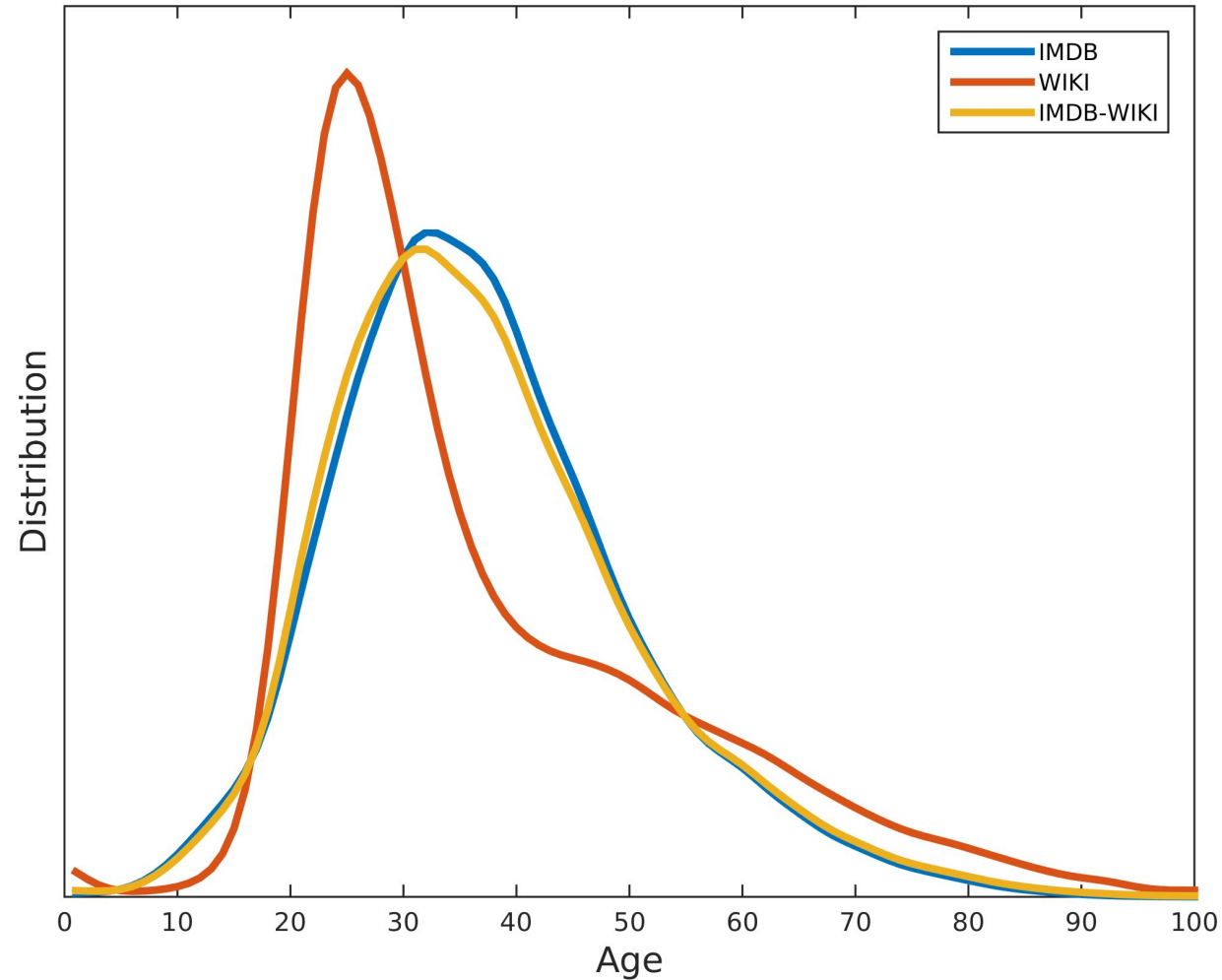
62,328 images

Labels

gender: 0, 1

age: date of birth and photo taken

IMDb & Wiki Dataset - Age Distribution



Solution

- Split data into train, validation and testing sets
- Resize images to fixed dimensions (e.g. 224x242px)
- Deep Learning (Keras on Theano)
 - GoogLeNet model (Best accuracy density)
 - Adam optimization (Adaptive Moment Estimation)
- Ordinal loss for age classes (e.g. weighted kappa)
- Categorical loss for gender classes (e.g. cross-entropy)

Evaluation

- Use the Wiki dataset
- Split data into train, validation and testing sets
- Evaluate the data on the testing set
- Report accuracy, precision and recall

Thank you!

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