Price Suggestion for Online Second-hand Items

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Task

The designed price suggestion system should be able to:
(1): offer effective price suggestions for online second-hand items;
(2): simplify the item listing process.

Macbook Air, 13.3”, 4G, 320G, almost new!

Intelligent price suggestion system

¥3618.02
suggested price
Challenges

(1) Inadequate image information;
(2) Bad image quality;
(3) Limited data for uncommon categories;
(4) Reducing listing efforts of sellers.
Key points:

1. To simplify the second-hand item listing process, a vision-based price suggestion module is designed which only requires the user to upload an image of the item to sell.

2. A truncate loss is proposed to simplify the training process of the vision-based price suggestion module.

3. A retrieval model is presented to replace the regression model to perform multi-modal price prediction.
Conclusions

(1) We introduced an intelligent price suggestion system for online second-hand items, and simplifying the second-hand item listing process for users was taken into consideration when designing the price suggestion system.

(2) A vision-based price suggestion module was designed, which consists of a binary classification model to determine whether an uploaded image is qualified to do price suggestion for the listed item, and a regression model to provide the price suggestions for items with qualified images.

(3) A truncate loss was designed to simplify the overall training process of the vision-based price suggestion module.

(4) A multimodal retrieval algorithm was proposed for second-hand items whose images are not qualified for vision-based price suggestions.