Kotaro Kikuchi

PERSONAL DETAILS

Mail	kotaro@pcl.cs.waseda.ac.jp
Website	https://ktrk15.github.io

EDUCATION

Ph.D in Computer Science, Waseda University 2018.4 -

M.Sc. in Computer Science, Waseda University 2016.4 - 2018.3

B.Sc. in Computer Science, Waseda University 2012.4 - 2016.3

RESEARCH INTERNSHIPS

CyberAgent AI Lab 2018.6 - 2018.8
We built a system that automatically replaces person figure in the structured banner image (e.g., SVG, PSD) while preserving semantics and poses.

Microsoft Research Asia 2018.9 - 2018.12
We analyzed state-of-the-art model for video retrieval and tried to improve accuracy by incorporating the novel attention mechanism.

RESEARCH PROJECTS

Computational Support for Graphic Design Creation
▷ **Deep learning for object placement**
Spatially placing an object onto a background is a basic operation in graphic design. We introduce the regularization technique and succeed in training a GAN-based model that predicts spatial parameters for the foreground object.

Intersection between Computer Vision and Natural Language Processing
▷ **Exploiting dictionary definitions for zero-shot image classification**
We used definitions to enrich semantic representations for object classes and achieved state-of-the-art accuracy in large-scale experiments (Master's thesis).
▷ **Searching video defined by textual queries**
We regularly participated in the video retrieval competition (TRECVID Ad-hoc Video Search). Our developed system utilizes tens of thousands of concept detectors respecting the given textual query.

HONORS & AWARDS

▷ First place in the manually-assisted Ad-hoc Video Search task and second place in the fully-automatic Ad-hoc Video Search task on TRECVID 2017 competition.

▷ Student honorable mention at the 20th Meeting on Image Recognition and Understanding (MIRU).

▷ First place in the manually-assisted Ad-hoc Video Search task on TRECVID 2016 competition.

GRANTS

▷ Scholarship of Graduate Program for Embodiment Informatics 2016.4-2020.3 (expected)

RESEARCH ACTIVITIES

▷ Student volunteer at International Conference on Computational Linguistics (COLING) 2016.

SKILLS

▷ *Languages*: Japanese (native), English (upper-intermediate, TOEIC 800)

▷ *Programming*: Python (preferred), Google Cloud Platform (e.g. Cloud Dataflow), HTML/CSS, Javascript, MySQL

PUBLICATIONS

International Conference/Workshop (Refereed)

1. Kotaro Kikuchi, Kota Yamaguchi, Edgar Simo-Serra, Tetsunori Kobayashi, "Regularized Adversarial Training for Single-shot Virtual Try-On ," Second Workshop on Computer Vision for Fashion, Art and Design, ICCV 2019.

2. Koji Hirakawa, Kotaro Kikuchi, Kazuya Ueki, Tetsunori Kobayashi, Yoshihiko Hayashi, "Ad-hoc Video Search Improved by the Word Sense Filtering of Query Terms," AIRS 2018.

3. Kazuya Ueki, Koji Hirakawa, Kotaro Kikuchi, Tetsunori Kobayashi, "Fine-grained Video Retrieval using Query Phrases—Waseda_Meisei TRECVID 2017 AVS System—," ICPR 2018.

4. Kotaro Kikuchi, Naohiro Tawara, Tetsunori Kobayashi, Yoshihiko Hayashi, "Word Vector Augmentation by its Definition for Zero-shot Image Classification," Language and Vision Workshop, CVPR 2017.

5. Kotaro Kikuchi, Kazuya Ueki, Tetsuji Ogawa, Tetsunori Kobayashi, "Video Semantic Indexing using Object Detection-Derived Features," EUSIPCO 2016.

International Conference/Workshop (Unrefereed)

5. Kazuya Ueki, Yu Nakagome, Koji Hirakawa, Kotaro Kikuchi, Yoshihiko Hayashi, Tetsuji Ogawa, Tetsunori Kobayashi, "Waseda_Meisei at TRECVID 2018: Ad-hoc Video Search," TRECVID Workshop 2018.

6. Kazuya Ueki, Koji Hirakawa, Kotaro Kikuchi, Tetsuji Ogawa, Tetsunori Kobayashi, "Waseda_Meisei at TRECVID 2017: Ad-hoc Video Search," TRECVID Workshop 2017.

7. Kazuya Ueki, Kotaro Kikuchi, Susumu Saito, Tetsunori Kobayashi, "Waseda at TRECVID 2016: Ad-hoc Video Search," TRECVID Workshop 2016.

Domestic Conference

8. <u>Kotaro Kikuchi</u>, Kota Yamaguchi, Edgar Simo-Serra, Tetsunori Kobayashi, "Regularizing Adversarial Training for Single-shot Object Placement," MIRU 2019 (will be published).

Visit my website for more details.