

# Tomoyuki Suzuki

Research Scientist at CyberAgent / Ph.D. student at Keio University / Kaggle Expert  
E-mail: [tomoyukun1101@gmail.com](mailto:tomoyukun1101@gmail.com), HP: <https://tomoyukun.github.io/biography/>

## INTERESTS

---

Computer vision and Machine learning.  
Especially, video recognition, image/video/multimodal representation learning and video decomposition.

## EDUCATION

---

**Ph. D. in Computer Science, Keio Univ.** Oct 2021 - Present, Japan  
Theme: Efficient video recognition, Supervisor: [Prof. Yoshimitsu Aoki](#)

**M.S. in Computer Science and Electronic Engineering, Keio Univ.** Apl. 2017 - Mar. 2019, Japan  
Theme: "Few-shot domain adaptation for human pose estimation", [Prof. Yoshimitsu Aoki](#)

**B.E. in Electronics and Electrical Engineering, Keio Univ.** Apl. 2013 - Mar. 2017, Japan  
Theme: "Video action recognition via human pose-centric learning", [Prof. Yoshimitsu Aoki](#)

## WORK EXPERIENCE

---

**CyberAgent, Inc.** Aug. 2020 - Present, Japan  
Research Scientist (full-time), Manager: [Dr. Kota Yamaguchi](#)

- Research on themes related to the optimization of creative workflows, such as video layer decomposition and audio source separation for video BGM.
- R&D on improving ad (image and video) effectiveness prediction by implementing state-of-the-art multimodal architectures and pre-training methods.

**DeNA Co., Ltd. / Mobility Technologies Co., Ltd.** Apr. 2019 - July 2020, Japan  
Research Engineer (full-time)

- R&D on driver's action recognition: I came up with and implemented online action recognition models. Also, I constructed a training dataset and an evaluation protocol cooperatively with business teams. I deployed the model I implemented in collaboration with product engineers, and this model had long been used as a core technology of a driver assistance product ([DRIVE CHART](#)). I made a presentation about this R&D project in the company's tech conference for PR ([YouTube](#))
- Contribution to the company's technology presence: I wrote a survey blog about video recognition ([link](#)), made a report of CVPR 2019 ([SlideShare](#)).

**Recruit Holdings Co., Ltd.** Aug. 2017 - Mar. 2018, Japan  
Data Scientist (intern)

- R&D on ad text generation from thumbnail images: I implemented and tested image-to-text models. A part of my implementation was used for a deployed model.

**AIST (National Institute of Advanced Industrial Science and Technology)** May. 2017 - Mar. 2019, Japan  
Research Scientist (intern), Supervisor: [Dr. Hirokatsu Kataoka](#)

- Research on risk anticipation in drive videos: I came up with a novel loss function, which improves the earliness of risk anticipation, constructed a dataset, implemented methods, conducted comprehensive experiments, and wrote a paper which is published in **CVPR 2018** (first author) [3].
- Research on unsupervised representation learning: I made a presentation about research on unsupervised video representation learning at **ECCV 2018 Person in Context workshop** (first author) [4]. Also I made a comprehensive survey of unsupervised representation learning ([SlideShare](#)).

## **PUBLICATIONS** (REPRESENTATIVE)

---

### **Journal**

[1] **Tomoyuki Suzuki**, Yoshimitsu Aoki, “Efficient Transformer-Based Compressed Video Modeling via Informative Patch Selection”, *Sensors*, 23 (1), 2022.

[2] **Tomoyuki Suzuki**, Yoshimitsu Aoki, “Time-sequential action recognition using pose-centric learning for action-transition videos”, *Journal of the Japan Society for Precision Engineering*, 83 (12), 2017.

### **International conference (peer-reviewed)**

[3] **Tomoyuki Suzuki**, Hirokatsu Kataoka, Yoshimitsu Aoki, Yutaka Satoh, “Anticipating Traffic Accidents with Adaptive Loss and Large-scale Incident DB”, *CVPR 2018*.

[4] **Tomoyuki Suzuki**, Takahiro Itazuri, Kensho Hara, Hirokatsu Kataoka, “Learning Spatiotemporal 3D Convolution with Video Order Self-Supervision”, *ECCV 2018 workshop on Person In Context*.

[5] **Tomoyuki Suzuki**, Munetaka Minoguchi, Ryota Suzuki, Akio Nakamura, Kenji Iwata, Yutaka Satoh, Hirokatsu Kataoka, “Semantic Change Detection”, *ICARCV 2018*

[6] Kaori Abe, Munetaka Minoguchi, Teppei Suzuki, **Tomoyuki Suzuki**, Naofumi Akimoto, Yue Qiu, Ryota Suzuki, Kenji Iwata, Yutaka Satoh, Hirokatsu Kataoka, “Fashion Culture Database: Construction of Database for World-wide Fashion Analysis”, *ICARCV 2018*.

## **SKILLS**

---

Python, C++, PyTorch, TensorFlow, GCP, AWS

## **AWARDS**

---

**Best Overseas Team Awards on ACM MM 2021 Grand Challenge** 2021  
Prised for the best score among all the overseas teams in ACM MM 2021 Grand Challenge “[Tencent Advertisement Algorithm Competition](#)”.

## **ADDITIONALS**

---

- Kaggle Expert
- Please refer to [HomePage](#) for other presentations, articles and activities.