

# CHIIHIRO NAKATANI

PhD student at Toyota Technological Institute

◇ Last Update October 20, 2025

◇ Email: [sd23501@toyota-ti.ac.jp](mailto:sd23501@toyota-ti.ac.jp)

◇ Homepage: [https://chihiro.github.io/portfolio\\_english.html](https://chihiro.github.io/portfolio_english.html)

## EDUCATION/AFFILIATION

---

### **Toyota Technological Institute, Japan**

*April 2023 - present*

Ph.D. candidate in Electronics and Information Engineering

Advisor: Prof. Norimichi Ukita

### **JSPS Research Fellowship for Young Scientists (DC2)**

*April 2026 - September 2026*

### **Idiap Research Institute, Switzerland**

*April 2025 - June 2025*

Visitor

Advisor: Prof. Jean-Marc Odobez

### **Toyota Technological Institute, Japan**

*April 2021 - March 2023*

Master of Engineering

Department of Electronics and Information Engineering

Advisor: Prof. Norimichi Ukita

(Graduated at the top of the class)

### **Toyota Technological Institute, Japan**

*April 2018 - March 2021*

Bachelor of Engineering

Department of Electronics and Information Engineering

(Grade skipping without graduation for early entry into the master program)

## RESEARCH INTEREST

---

My main research interests lie in computer vision and machine learning for group activity understanding, in particular, joint attention estimation, group activity recognition, gaze estimation, and self-supervised (unsupervised) learning.

## RESEARCH PROJECTS

---

### **Weakly/Self-supervised Group Activity Feature Learning**

*CVPR 2024*

The project tries to extract features representing group activity without group activity labels. Difference from group activity recognition in which manually defined coarse group activity classes are used, fine-grained group activity can be learned in this work. We proposed employing person action/feature prediction as pretext tasks to learn group activity features.

[Paper link](#)

### **Joint Attention Estimation Using People Attributes**

*ICCV 2023*

The project focuses on estimating attention shared by multiple people. While previous methods use high-dimensional image features as cues for the estimation, we proposed using low-dimensional person attributes (e.g., location, gaze direction, and action) to consider interactions between multiple people.

[Paper link](#)

## PUBLICATIONS

---

- K. Yokoyama, **C. Nakatani**, Norimichi Ukita  
Dynamic Group Detection using VLM-augmented Temporal Groupness Graph  
Proc. of IEEE International Conference on Computer Vision (ICCV2025), October, 2025.
- C. Nakatani**, H. Kawashima, N. Ukita  
Learning Group Activity Features Through Person Attribute Prediction  
Proc. of IEEE Conference on Computer Vision & Pattern Recognition (CVPR2024), June, 2024.
- C. Nakatani**, H. Kawashima, N. Ukita  
Interaction-aware Joint Attention Estimation Using People Attributes  
Proc. of IEEE International Conference on Computer Vision (ICCV2023), October, 2023.
- C. Nakatani**, H. Kawashima, N. Ukita  
Joint Learning with Group Relation and Individual Action Proc. of the 18th International Conference on Machine Vision Applications (MVA2023), July, 2023.
- D. Mushiake, K. Otomo, **C. Nakatani**, N. Ukita  
Shape Preservation in Image Style Transfer for Gaze Estimation  
Proc. of the 18th International Conference on Machine Vision Applications (MVA2023), July, 2023.
- C. Nakatani**, K. Sendo, N. Ukita  
Group Activity Recognition Using Joint Learning of Individual Action Recognition and People Grouping  
Proc. of the 17th International Conference on Machine Vision Applications (MVA2021), July, 2021.

## SKILLS

---

<b>Programming</b>	Python, MATLAB, HTML, CSS, JavaScript, SQL
<b>Machine learning framework</b>	Pytorch, Tensorflow
<b>Software &amp; Tools</b>	Latex, Git

## WORK EXPERIENCES

---

<b>Playbox</b> <i>Machine Learning Engineer</i> Topics: Action spotting Location: Remote	<i>October 2025 - December 2025</i>
<b>Hokkaido Nippon-Ham Fighters</b> <i>Sports Analyst Internship</i> Topics: Action quality assessment Location: Hokkaido, Japan	<i>April 2024 - September 2024</i>
<b>OptFit Corporation</b> <i>Machine Learning Engineer</i> Topic: Human pose estimation Location: Remote	<i>October 2019 - June 2020</i>
<b>Activate Data Corporation</b> <i>Machine Learning Engineer</i> Topic: Object detection Location: Remote	<i>April 2019 - September 2019</i>

## SERVICES

---

Reviewer: CVPR2024, CVPR2025, ICCV2025, ICMI2025

## AWARDS

---

<b>JST ASPIRE Kyoto Workshop Poster Award</b>	<i>July 2025</i>
<b>IEEE Nagoya Branch International Conference Research Presentation Award</b>	<i>April 2024</i>
<b>SICE Outstanding Student Award</b>	<i>March 2023</i>

## GRANTS

---

<b>Scholarship offered by The Toyoaki Scholarship Foundation</b>	<i>April 2023 - March 2025</i>
<b>Travel grant of Telecommunications Advancement Foundation</b>	<i>April 2024</i>
<b>Travel grant of Tateishi Science and Technology Foundation</b>	<i>October 2023</i>
<b>Toyota Foundation Scholarship,</b>	<i>April 2018 - March 2021</i>