

Patrick J. Ramos

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Education

April 2024 – present

Osaka University
PhD Computer Science
MEXT Scholarship

June 2022 – July 2023

Ateneo de Manila University
MS Computer Science
Ateneo Freshman Merit Scholarship Thesis: "DistillCLIP - Knowledge Distillation of Contrastive Language-Image Pretrained Models"

August 2018 – May 2022

Ateneo de Manila University
BSMS Computer Science, Specialization in Data Science and Analytics
Magna Cum Laude
Ateneo Freshman Merit Scholarship
Thesis: "Adaptive Aggregation of Embeddings in Transformers for Video"

Research Experience

October 2023 – March 2024

Intelligence and Sensing Lab.
Osaka University
Research Student
Conducting research under the MEXT Scholarship

January 2022

Social Computing Laboratory
Nara Institute of Science and Technology
Intern
Conducted research comparing inferred emotions of writers and readers of Japanese Tweets on vaccinations to Japanese vaccination measures by fine-tuning a BERT

July 2021 – August 2021

**Ateneo Laboratory for Intelligent Visual Environment
Ateneo de Manila University**

Intern

Conducted research on the use of the DETR object detection framework with Transformer and MLP-based backbones for medical mask detection

Publications

- [1] Patrick Ramos, Raphael Alampay, and Patricia Abu. Knowledge distillation with relative representations for image representation learning. In *Progress on Pattern Classification, Image Processing and Communications - Proceedings of the CORES and IP&C Conferences 2023*, 2023.
- [2] Patrick John Ramos, Kiki Ferawati, Kongmeng Liew, Eiji Aramaki, and Shoko Wakamiya. Emotion analysis of writers and readers of Japanese tweets on vaccinations. In *Proceedings of the 12th Workshop on Computational Approaches to Subjectivity, Sentiment & Social Media Analysis*, pages 95–103, Dublin, Ireland, May 2022. Association for Computational Linguistics.

Research Interests

- model architecture and pretraining objectives for text, image, and vision-language representation learning
- part-whole hierarchical parsing of images for robust image representation learning
- foundation model applications

Skills

- implementing own ideas and those from papers with frameworks such as:
 - PyTorch
 - HuggingFace
 - pandas
 - NumPy
 - Optuna
- reading machine learning papers
- training deep learning models
- data visualization