

Man Minh Ho

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🔗 <https://minhmanho.github.io/> 🔄 <https://github.com/minhmanho>

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•• <https://www.flickr.com/photos/sarugraphy>



SKILLS

Programming Languages

Python, Matlab, C/C++, SQL, HTML, Lua (Scripting Lightroom).

Software

Adobe Photoshop (proficient), Adobe Lightroom, Audacity.

Frameworks and Libraries

PyTorch, PyTorch-Lightning, PyTorch Mobile for iOS, OpenCV, Kornia, Caffe, TensorFlow, RabbitMQ, MongoDB.

Server Management

Set up and maintain CPU/GPU linux servers.

EDUCATION

Ph.D. in Science and Engineering, Hosei University 📄

Expected completion within 1.5 years

09/2020 – 03/2022

Tokyo, Japan

M.Eng. in Science and Engineering, Hosei University 📄

09/2018 – 09/2020

Tokyo, Japan

B.S. (Honors) in Computer Science, University of Information Technology 📄

09/2013 – 09/2017

Ho Chi Minh, Vietnam

PROJECTS

Smartphone Photo Scanning 📄

Presented a new dataset DIV2K-SCAN for smartphone-scanned photo restoration. Proposed Domain Simulation to generalize many different shooting devices and environments. Proposed a Semi-Supervised Learning framework to solve limited training data.

Blending and Retouching Photos with Color Style Transfer 📄

Defined a new color style based on low-level transformation. Proposed a supervised color style transfer. As a result, Lightroom Preset can be a well-retouched photo. Future work is an application for Image Manipulation (a sample by me 📄).

Solving Video Compression Degradation 📄

Provided a better understanding of Video Compression Degradation. Adopted Super-Resolution, Colorization, and Frame Interpolation for Learned Image/Video Compression. Designed Restoration-Reconstruction Deep Neural Networks (RR-DnCNNs) to improve the compression ratio of a down-sampling-based video coding.

Applications for Visually Impaired People 📄

Proposed a way of leveraging depth estimation to avoid noise in the background and narrow the depth of interest in such case that the person desires to detect coins/banknotes only on a certain surface (e.g., their hands).

PROFESSIONAL EXPERIENCE

Research Assistant, Waseda University Research on solving Video Compression Degradation.	2021 – present Tokyo, Japan
Research Assistant, Hosei University Research on Deep Learning techniques for Video Compression. Manage GPU servers and assist other students in their projects.	2018 – present Tokyo, Japan
Machine Learning Engineer, EyeQ Tech Deal with real-world problems related to face recognition, multi-face tracking, and object detection using deep learning techniques. Take a key role in deploying deep models for computer vision services. Experience Tensorflow, Nginx, RabbitMQ, MongoDB, etc. Participate in interviewing candidates. Recognized as a "Key Contributor" and promoted/trained to be a team lead.	2017 – 2018 Ho Chi Minh, Vietnam
Human Management (part-time), SouL Magazine Manage others to meet monthly deadlines, communicate between departments to solve problems. Participate in recruiting and evaluating good writers.	2014 – 2016 Ho Chi Minh, Vietnam

AWARDS

Hosei University Science and Engineering Departments Education/Research Promotion Fund Academic Achievement Award 2020, <i>Hosei University</i> <ul style="list-style-type: none">Presented to a student who achieves Top-1 for Research Performance and GPA in Science and Engineering Departments.	07/2020
Best Paper Runner-up Award, <i>The 26th International Conference on Multimedia Modeling (MMM)</i> 	01/2020
Key Contributor, EyeQ Tech Vietnam 	08/2018
Squad of the month, EyeQ Tech Vietnam 	08/2018
The Five-Virtue Student, <i>Vietnam National University - University of Information Technology</i> 	12/2016

GRANTS AND SCHOLARSHIPS

Research Grant for Doctoral Courses, Hosei University	09/2020 – 03/2022
The 100th Year Anniversary Scholarship, Hosei University	07/2020
Japan Student Services Organization (JASSO) Scholarship, JASSO	10/2019
Daddy Longlegs Scholarship, Hosei University	09/2019
Monthly Scholarship for Students in Honors Programs, <i>Vietnam National University - University of Information Technology</i>	09/2013 – 09/2017

PUBLICATIONS

[1] **Man M. Ho**, and Jinjia Zhou. "Deep Photo Scan: Semi-Supervised Learning for dealing with the real-world degradation in Smartphone Photo Scanning." In Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), pp. 1880-1889. 2022.

[Webpage [↗](#)] [Poster [↗](#)] [Demo [↗](#)]

"A promising baseline for learned smartphone-scanned photo restoration."

[2] **Man M. Ho**, Lu Zhang, Alexander Raake, Jinjia Zhou, "Semantic-driven Colorization", In ACM SIGGRAPH European Conference on Visual Media Production (CVMP), pp. 1-10. 2021.

[GitHub [↗](#)]

"Proposed to apply human-like action in coloring a black-and-white image for learned image colorization."

[3] **Man M. Ho**, Jinjia Zhou, and Gang He. "RR-DnCNN v2. 0: Enhanced Restoration-Reconstruction Deep Neural Network for Down-Sampling-Based Video Coding." IEEE Transactions on Image Processing (TIP) 30 (2021): 1702-1715.

[GitHub [↗](#)]

"An extended version of the RR-DnCNN [7]. Re-designed network architecture for better learning capability."

[4] **Man M. Ho**, Jinjia Zhou, "Deep Preset: Blending and Retouching Photos with Color Style Transfer", In Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), pp. 2113-2121. 2021.

[Webpage [↗](#)] [Demo [↗](#)]

"Proposed a novel color style. End-users now can retouch their photos using any well-retouched photo they prefer."

[5] Huyen T. T. Bui, **Man M. Ho**, Xiao Peng, Jinjia Zhou, "Japanese Coins and Banknotes Recognition for Visually Impaired People", VizWiz Workshop, 2020.

[Paper [↗](#)] [Workflow [↗](#)]

"Proposed to use depth estimation for coins/banknotes detection to avoid noise in the background and narrow the depth of interests in case users desire to detect coins/banknotes on a certain surface."

[6] **Man M. Ho**, Jinjia Zhou, Gang He, Muchen Li, and Lei Li. "SR-CL-DMC: P-frame coding with Super-Resolution, Color Learning, and Deep Motion Compensation." In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, pp. 124-125. 2020.

[Paper [↗](#)]

"Adopted Super-Resolution, Colorization, and Frame Interpolation for P-frame compression."

[7] **Minh-Man Ho**, Gang He, Zheng Wang, and Jinjia Zhou. "Down-Sampling Based Video Coding with Degradation-Aware Restoration-Reconstruction Deep Neural Network." In International Conference on Multimedia Modeling, pp. 99-110. Springer, Cham, 2020.

[GitHub [↗](#)]

"Investigated the effect of compression degradation for training. Proposed a new learned down-sampling-based video coding framework."

[8] **Minh-Man Ho**, Jinjia Zhou, and Yibo Fan. "Respecting low-level components of content with skip connections and semantic information in image style transfer." In European Conference on Visual Media Production, pp. 1-9. 2019.

[Webpage [↗](#)]

"Conducted a research on skip connections and semantic maps for image style transfer"

COMMUNITY SERVICE - PAPERS REVIEW

British Machine Vision Conference (BMVC) 2020, 2021
Computer Vision and Pattern Recognition (CVPR) Workshops 2020
International Conference on Computer Vision (ICCV) 2021 (assistant)
Winter Conference on Applications of Computer Vision (WACV) 2021, 2022

LANGUAGES

Vietnamese	<div><div></div></div>	English	<div><div></div></div>
Japanese	<div><div></div></div>		

CERTIFICATES

Certificate of Completion for successfully completing the 320 hours Global Software Talent training course and examination on the specialty of Global .NET Developer 
issued by FPT Software, 2016.

REFERENCES

Tuan Hue Thi, *Senior Research Engineer*, Amazon Go
huetuan1984@gmail.com

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