

KAZUKI MINEMURA

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COMPUTER VISION ENGINEER

As a Computer Vision Engineer with over 5 years of experience, I have developed and validated Deep Learning models and algorithms to enhance product capabilities. Additionally, as a Computer Scientist with 10+ years of research experience, I possess extensive knowledge in computer vision algorithm development and validation. My passion for sharing the latest computer vision advancements and tackling challenges with my team has also driven me to succeed.

TECHNICAL SKILLS

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|----------------------------------|---|
| Programming Languages: | Python, C/C++, FORTRAN, MATLAB, TypeScript, VBA |
| Deep Learning Frameworks: | OpenVINO, Caffe, Tensorflow, PyTorch |
| Development Tools: | Jira, HSDS, Jenkins, Ansible, Docker, Git, Vim |
| Web Frameworks: | Angular, Tornado |
| Data Modeling/Management: | JSON, XML MongoDB |
| Typesetting: | TeX, LaTeX |
| Operating Systems: | GNU/Linux, MS Windows, Yocto BSP |

PROFESSIONAL EXPERIENCE

Technical Consultant Engineer **Intel Kabushiki Kaisha, Tokyo, Japan** **July 2022 – Present**

- Led and coordinated multiple projects involving advanced computing technologies, ensuring seamless integration and performance optimization, e.g. oneDNN, CUDA-plugin, Intel® VTune.
- Delivered comprehensive training sessions and provided ongoing support for technology migration and optimization.
- Addressed and resolved complex technical issues, enhancing system stability and performance.
- Utilized advanced profiling tools to optimize code and improve system efficiency.
- Prepared and presented technical demonstrations and materials for various stakeholders.
- Contributed to the development and migration of cutting-edge computing frameworks and technologies, e.g. vllm.

Computer Vision Engineer **Intel Microelectronics (M), Penang, Malaysia** **Jan 2019 – Jun 2022**

- Successfully delivered the Smatlab project, which entailed developing and deploying a grading system demo for student behaviors on science examinations that is mandated by the China Ministry of Education for high school entrance exams.
- Led the development of multi-view classification and object detection models, leveraging OpenVINO and other deep learning frameworks, resulting in increased accuracy and efficiency.

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- Headed a validation and benchmark team, ensuring compliance with industry standards and best practices, and reported findings in a detailed dashboard that covered over 6,000 test cases across multiple backends (CPUs, GPUs, VPUs).
- Standardized project execution using Ansible, Docker, Jenkins framework, and self-developed scripts, resulting in improved efficiency and accuracy.
- Managed CV/DL component validation projects, including test cases and execution, and actively participated in weekly technical analysis and discussion on deep learning and IoT trends.
- Mentored new employees and interviewed candidates for hiring, contributing to a skilled and diverse team.
- Provided high-quality technical support for customer engineers and customers, ensuring their satisfaction and trust in the company's products and services.

Software Validation Engineer

Jan 2018 - Dec 2018

- Designed and developed test codes and automation, resulting in a 5x increase in team work efficiency and productivity.
- Developed and fine-tuned an object detection model for lidar signal, ensuring accuracy and reliability for real-world applications.
- Submitted a paper and presented an oral presentation at an international conference, highlighting the research and development efforts.
- Delivered a keynote speech at an IPIARTI Symposium, showcasing the company's innovation and technological advancements.

Graduate Trainee

Jun 2016 - Dec 2017

- Conducted in-depth analysis of deep learning technologies and trends, and collaborated with internal and external teams to develop cutting-edge solutions.
- Designed and developed a lidar object detection model, which leverages image processing, computer vision, and deep learning techniques.
- Conducted weekly research syncs with team and external collaborators, ensuring effective communication and coordination.
- Developed an object detection demo for internal company events, showcasing the company's technical expertise and innovation.
- Translated Autoware documents from Japanese to English, demonstrating excellent language and communication skills.

EDUCATION

Ph.D. in Computer Science

Feb 2013 - Jan 2017

University of Malaya, Kuala Lumpur, Malaysia

- Conducted research on "Sketch - An Investigation into Feature Extraction in Compressed Domain"
- Published 2 ISI-indexed journal articles, 1 book chapter, and 8 peer-reviewed conference papers

M.S. in Electrical and Electronics Engineering

Apr 2010 - Mar 2012

Shinshu University, Nagano, Japan

B.S. in Electrical and Electronics Engineering

Apr 2006 - Mar 2010

Shinshu University, Nagano, Japan

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PUBLICATIONS (Last 6 years)

ISI Indexed Journal

- J1. Raphaël C.-W. Phan, Yin-Yin Low, KokSheik Wong, **Kazuki Minemura**, "Strengthening speech content authentication against tampering". Speech Communication. Vol 6. 2021, (IF 2.017)
- J2. **Kazuki Minemura**, KokSheik Wong, C.-W Phan, Kiyoshi Tanaka, "A novel sketch attack for H.264/AVC format-compliant encrypted video". IEEE Transactions on Circuits and Systems for Video Technology. Jul. 2016, (IF 9.9)
- J3. **Kazuki Minemura**, KokSheik Wong, Xiaojun Qi and Kiyoshi Tanaka, "A Scrambling Framework for Block Transform Compressed Image," Multimedia Tools and Application, Feb. 2016, (IF 2.313)

Peer Reviewed Conference Paper

- C1. **Kazuki Minemura**, Hengfui Liao, Abraham Monrroy and Shinpei Kato, "LMNet: Real-time Multiclass Object Detection on CPU using 3D LiDAR", IEEE Conference on Intelligent Robot Systems (ACIRS), pp. 28-34, 2018.
- C1. Yiqi Tew, **Kazuki Minemura** and KokSheik Wong, "HEVC selective encryption using transform skip signal and sign bin", Asia-Pacific Signal and Information Processing Association (APSIPA), pp. 963-970, 2015.
- C2. Masaya Moriyama, **Kazuki Minemura** and KokSheik Wong, "Moving Object Detection in HEVC Video by Frame Sub-sampling," IEEE International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS), pp. 48-52, 2015.