Tommy K.W. **Ho**

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Education

University of Washington — *Seattle, WA*

Computer Science, M.S. in Technology Innovation (MSTI) — *Sep. 2019 - Dec. 2020*

- GPA: 3.76/4.0
- Selected Relevant Coursework: Programming For Digital And Physical User Interfaces, Design Thinking Studio, Hardware Software Lab, Managing Data And Signal Processing,

National Tsing Hua University — *Hsinchu, TW*

B.S. in Computer Science — *Sep. 2014 - Jun. 2018*

- GPA: 3.4/4.0
- Selected Relevant Coursework: Graphics Programming and Applications, Large-Scale Machine Learning, Compiler Design, Computer Graphics, The Cutting Edge of Deep Learning, Natural Language Processing Lab

Professional Experience

Microsoft and University of Washington Global Innovation Exchange (GIX) — *Seattle, WA*

Graduate Launch Project Developer in collaboration with Microsoft AI for Good — *Jun. 2020 - NOW*

- Build an AI fundus camera to detect diabetic retinopathy used at developing countries
- Conduct clinical study and user research on existing prototype and improve it over iterations
- Responsible for the software side of the project, which involves image stitching, glare reduction, image classification for fundus photography, Flask backend, and web app development

NVIDIA — *Taipei, TW*

AI Developer Technology Engineer Intern — *Aug. 2018 - Jan. 2019*

- Conducted research on object detection and semantic segmentation methodologies on current and next-generation GPU architectures
- Reported research and projects result to senior software engineers and solution architects on NVIDIA DevTech APAC team in weekly meetings
- Refined the training and inference workflow of deep learning with platforms powered by NVIDIA such as DALI and TensorRT. Achieved 50% acceleration on data preprocessing stage on DGX-2

Elsa Lab, National Tsing Hua University — *Hsinchu, TW*

Research Assistant (Supervised by Prof. Chun-Yi Lee) — *Feb. 2018 - Jan. 2019*

- Yang, H. K., Fu, T. J., Chiang, P. H., **Ho, K. W.**, & Lee, C. Y. (2019, November). A Distributed Scheme for Accelerating Semantic Video Segmentation on An Embedded Cluster. In 2019 IEEE 37th International Conference on Computer Design (ICCD)
- Yang, H. K., Cheng, A. C., **Ho, K. W.**, Fu, T. J., & Lee, C. Y. (2018). Visual relationship prediction via label clustering and incorporation of depth information. In Proceedings of the European Conference on Computer Vision (ECCV)

Alfred Labs — *Taipei, TW*

Data Science and Machine Learning Intern — *Dec. 2017 - Jun. 2018*

- Conducted research on deep learning frameworks for mobile phones, e.g. TensorFlow Lite, TensorFlow Mobile, CoreML, and computationally efficient image classification, object detection, and face recognition methodologies
- Conducted research on cutting-edge deep learning frameworks and toolkits designed for embedded devices especially Raspberry Pi, such as the Intel Movidius Neural Compute Stick and Google AIY Vision Kit
- Architected a pilot project deploying smart surveillance system with face recognition neural network on Raspberry Pi 3, which is improved by 80% on efficiency and scalable compared to previous prototypes

High5.ai — *Taipei, TW*

Software Developer Intern — *July. 2017 - Oct. 2017*

- Conducted research on AI chatbot's production efficiency, semantic analysis and text generation methodologies
- Delivered an upgraded scalable AI chatbot with inference speed 1000% faster and a word embedding covering 98% of domain knowledge
- Solved technical issues on AWS and maintained the operation of the service

Skills

Programming Languages, Frameworks, Tools and Languages

Programming Languages, Frameworks, Tools and Languages

- **Programming Languages:** C, C++, Python, Java, shell scripting, JavaScript
- **Frameworks and Tools:** Git, Flask, OpenGL, Android Studio, LaTex, CSS, HTML
- **Data Science and Machine Learning Frameworks:** NumPy, Pandas, Gensim, OpenCV, NLTK, Scikit-learn, Keras, TensorFlow, PyTorch
- **Toolkits:** Raspberry Pi, Google AIY Vision Kit, Intel Movidius NCS, NVIDIA Jetson