

# Tony Ho - Computer Vision and Machine Learning Engineer

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[https://tho121.github.io/portfolio\\_site](https://tho121.github.io/portfolio_site)

## EXPERIENCE

### Computer Vision and Machine Learning Engineer

DaoAI Robotics (Co-op) - Vancouver, Canada - January 2022 - August 2022

- Developed a computer vision training and deployment pipeline
- Applied image processing and model inference, in C++
- Trained models using PyTorch, Torchvision, Detectron2, in Python
- Researched, developed, and deployed a Rotated Mask RCNN model

### Game Developer Software Engineer

Critical Force - Kajaani, Finland & Seoul, South Korea - July 2017 - April 2019  
Artcode Interactive - Vancouver, Canada - November 2014 - January 2017  
Skybox Labs Inc - Vancouver, Canada - November 2013 - October 2014

- Created various gameplay systems using 3D vector physics
- Developed core user features and developer support tools for live services
- Worked in agile environments with daily stand-ups with technical and non-technical stakeholders

## PROJECTS

Portfolio Website - [https://tho121.github.io/portfolio\\_site](https://tho121.github.io/portfolio_site)

### AWS Warehouse Image Classifier

Trained ResNet34 and ViT image classification models using AWS Sagemaker and other cloud resources, leveraging distributed training and spot instances

### Connect4 Action AI

Trained Faster-RCNN instance segmentation model and exported to PyTorch Mobile, deployed on Android and displays results to the user

### Emoji Prediction

Built a dataset using Twitter API and fine-tuned the DistilBERT model for text classification with emojis as labels

### Obstacle Avoidance Robot Simulation

Trained a Proximal Policy Optimization agent using Unity MLAgents to navigate an environment of obstacles in parallel

## RESEARCH

### ToonNote: Improving Communication in Computational Notebooks Using Interactive Data Comics

Published at CHI 2021, 2nd author

## EDUCATION

**Simon Fraser University**  
Vancouver, Canada

### **Master of Science in Professional Computer Science**

September 2022 - December 2023 (expected graduation date)

### *Bachelor in Science*

September 2020 - August 2022

## TECHNICAL SKILLS

- Python
- C/C++
- C#
- Java
- Git
- PyTorch
- Torchvision
- OpenCV
- 🧠 Transformers
- Tensorflow
- AWS Sagemaker
- Unity3D
- MLAgents
- Jupyter Notebook
- Visual Code
- Android Studio
- Pandas
- Matlab
- Linux
- SQL

## CERTIFICATES

Udacity Nanodegree for **AWS Machine Learning Engineer**

Udacity Nanodegree for **Deep Reinforcement Learning**

Udacity Nanodegree for **C++**