

Tony Ho - Computer Vision and Machine Learning Engineer

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[LinkedIn](#) / [GitHub](#) / [Portfolio](#)

EXPERIENCE

Machine Learning Engineer

Hypothetic (Co-op) - Vancouver, Canada

May 2023 - Jan 2024

- Developed point cloud models for 3D segmentation
- Trained deep learning models using PyTorch and PointNet++, in Python
- Prototyped a web tool for zero-shot segmentation using SAM in ReactJS
- Created an auto-labeling method for 3D model segments using UV texture data
- Researched applications in the generative 3D field based on recent papers

Computer Vision and Machine Learning Engineer

DaoAI Robotics (Co-op) - Vancouver, Canada

Jan 2022 - Aug 2022

- Developed a computer vision training, testing, and deployment pipeline
- Trained deep learning models using PyTorch, Torchvision, Detectron2, in Python
- Applied image processing and model inference, in C++ with LibTorch
- Implemented segmentation models such as Faster-RCNN, Mask-RCNN, UNet
- Improved accuracy to over 95% for bin picking tasks in a factory environment
- Researched, developed, and deployed a Rotated Mask-RCNN model, improving mask IOU from less than 0.5 to over 0.8

Game Developer Software Engineer

Critical Force - Kajaani, Finland & Seoul, South Korea

Jul 2017 - Apr 2019

Artcode Interactive - Vancouver, Canada

Nov 2014 - Jan 2017

- Created gameplay systems using 3D vector physics in C# with Unity3D
- Optimized code performance for real-time 3D simulations on mobile devices
- Developed core features and developer tools for live services used by 1 million daily users, including gameplay, asset pipeline, UI, social, and localization
- Worked in agile environments with daily stand-ups with technical and non-technical stakeholders

PROJECTS - [Portfolio Website](#)

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 on device in real-time, in Python and Java

CERTIFICATES

Udacity Nanodegree for **AWS Machine Learning Engineer**

EDUCATION

Simon Fraser University

Vancouver, Canada

Master of Science in
Professional Computer
Science

Visual Computing specialization
Sep 2022 - Apr 2024

Bachelor of Science in
Computer Science

Sep 2020 - Aug 2022

COURSES

- Generative Models
- Frontiers of Computer Vision
- Rendering for AI
- Machine Learning
- Cloud Computing

TECHNICAL SKILLS

Languages

- Python
- C/C++
- C#
- Java

Libraries/Frameworks

- PyTorch
- Linux/Ubuntu
- OpenCV
- Matlab
- Unity3D

Tools

- Git
- Visual Studio Code
- Docker
- Anaconda
- AWS
- Google Cloud
- Android Studio
- Pandas
- SQL