Tony Ho - Computer Vision and Machine Learning Engineer

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LinkedIn / GitHub / Portfolio

EXPERIENCE

Computer Vision and Machine Learning Engineer

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

- Developed a computer vision training, testing, and deployment pipeline
- Trained deep learning models using PyTorch, Torchvision, Detectron2, in Python
- Applyed image processing and model inference, in C++ with LibTorch
- Implemented segmentation models such as Faster-RCNN, Mask-RCNN, UNet
- Improved model accuracy for bin picking tasks in a factory environment
- 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
- Optimized code performance for real-time 3D simulations in mobile devices
- 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

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 realtime, in Python and Java

Emoji Prediction

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

Obstacle Avoidance Robot Simulation

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

RESEARCH

ToonNote: Improving Communication in Computational Notebooks Using Interactive Data Comics

Published at CHI 2021, 2nd author
Developed a JupyterLab extension using Typescript, enabling researchers to design, save, and convert visualizations in notebooks into a comic format

EDUCATION

Simon Fraser University
Vancouver, Canada

Master of Science in Professional Computer Science

September 2022 - December 2023 (expected graduation date)

Bachelor of Science in Computer Science

September 2020 - August 2022

TECHNICAL SKILLS

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

CERTIFICATES

Udacity Nanodegree for **AWS Machine Learning Engineer**

Udacity Nanodegree for **Deep Reinforcement Learning**

Udacity Nanodegree for **C++**